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Announcement of Higher Crude Prices Hinges on Enforcement of Proration Regulations

By ANDREW M. ROWLEY

A DESIRE upon the part of major purchasers of crude oil to increase prices is being handicapped by failure of state authorities to check the production of crude in excess of allowables. One large company, it is understood on two different occasions was prepared to announce an increase in prices it would pay for crude oil but deferred this action in view of the large quantities of crude oil being produced in excess of allowables in East Texas and Oklahoma City. It is said the latest contemplated increase was 25 cents a barrel. Producers throughout the Mid-Continent territory certainly are paying a terrifically high price for political meddling in the oil business.

It is remarkable how patient the industry as a whole has been under existing circumstances. This illegal production has kept prices at distress levels and prevented increases which would have been announced a long time ago. Postponement of these increases has meant millions of dollars lost to producers and refiners throughout the country. And it all goes back to the politicians who are supposed to enforce state regulations equitably.

It is a question how long producers and refiners will stand for these conditions. What the petroleum industry needs more than anything else is a moratorium on political interference but it will take most vigorous action to get rid of the political parasites who are sapping the very life blood of the business through inefficiency and failure to do their duty. Oil men do not blame individuals or companies who open their wells to protect their properties which are being drained by offset wells running at capacity, apparently without interference from officials charged with enforcing proration regulations.

The larger companies want to raise crude oil prices but they realize, as does everyone else, that an increase, under present conditions, would serve only as a further incentive to produce in excess of allowables as higher prices would simply increase the margin for operations of those producing excess oil and selling the excess under regularly posted prices. A few are preventing a large majority from enjoying better prices although this few probably would receive a larger income from the better prices which would prevail if thefts of oil were stopped.

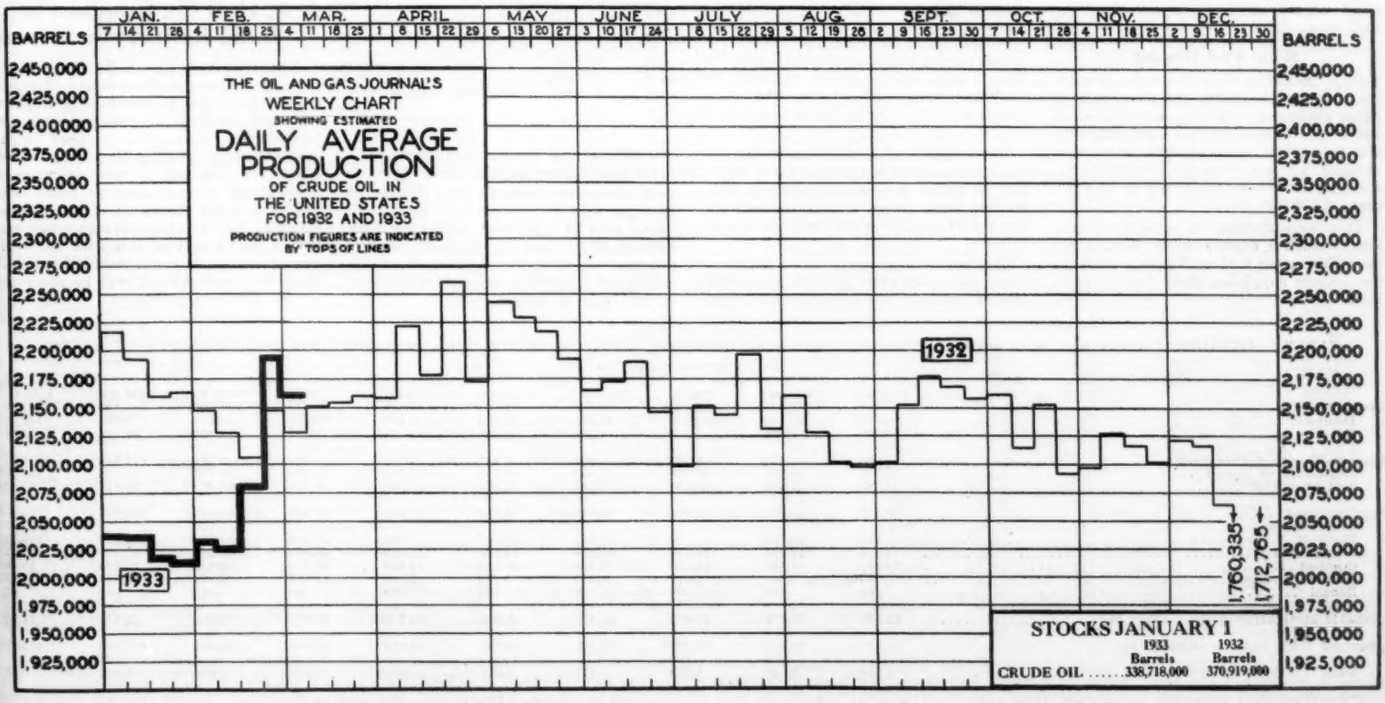
Crude oil prices will be increased quickly if and when illegal production is stopped.

Crude Oil Production in the United States

Estimated daily average production for the week ending March 4 and a comparison with previous week and one year ago, follows:

	Mar. 4	Feb. 25	Mar. 5, 1932
Oklahoma—			
Oklahoma City	171,655	216,635	93,165
Seminole-St. Louis	107,840	110,220	118,435
Remainder of State	196,920	194,885	206,780
Total Oklahoma	476,415	521,740	418,380
East Texas—			
Lathrop	122,310	114,580	110,469
Kilgore	98,437	93,098	97,765
Joiner	99,865	94,684	101,685
Total East Texas	320,612	302,362	309,919
West Texas	158,038	157,736	177,563
North Central Texas	73,052	72,158	70,785
Texas Panhandle	47,061	47,795	50,708
East Central Texas	59,195	59,441	54,847
Gulf Coast—Texas	125,659	124,453	104,032
Southwest Texas	54,310	54,364	57,352
Total State of Texas	837,927	818,309	825,206
Kansas	112,720	108,645	101,385
North Louisiana	32,335	28,995	27,905
Gulf Coast—Louisiana	32,588	33,139	27,116
Arkansas	30,780	31,950	34,020
Eastern Fields	106,000	106,000	115,000
Rocky Mountain area	77,196	76,444	84,206
California—			
Santa Fe Springs	53,250	51,250	65,000
Long Beach	67,250	68,000	78,750
Playa Del Rey	12,250	12,250	19,750
Elwood	12,500	15,250	16,650
Kettleman Hills	59,000	60,250	60,000
Remainder of State	257,750	261,000	258,100
Total California	462,000	468,000	498,250
Total United States	2,167,961	2,193,222	2,131,468

Decrease 25,261 bbls. daily.



Gasoline Demand in Next Four Months Figured by A.P.I. Committee on Refinery Statistics

The report of the American Petroleum Institute committee on refinery statistics and economics to the board of directors of the Institute follows. The committee on refinery statistics and economics is composed of D. J. Moran, chairman; T. H. Barton, A. J. Byles, T. A. Dines, K. R. Kingsbury, E. B. Reeser, E. G. Seubert, C. L. Suhr and H. C. Weiss. The statistical subcommitte was composed of W. A. Sinsheimer, chairman; Fred Van Covern, secretary; W. S. Ackerman, W. C. Allen, O. S. Ambrose, W. B. Case, E. H. Griswold, L. E. Harman, A. J. McIntosh, E. P. Salisbury and J. M. Sands.

This interim statistical survey and economic forecast of the refining situation embraces the period from January 1 to June 30, 1933. It gives effect to the actual conditions, as estimated for March 1, 1933, and anticipates reaching an economic motor fuel stock position by June 30, 1933.

The outstanding features contained in the report are:

1. A reduction in total motor fuel demand of 7.6 per cent, compared with the first half of 1932.

2. Stocks of motor fuel on June 30, 1933, should not exceed 50,428,000 bbls., which is 10,000,000 bbls. below the same date last year.

3. Required crude runs to stills average 2,090,000 bbls. per day as contrasted with 2,303,000 bbls. actually run during the comparable period of 1932.

Motor Fuel Inventories

Inventories have consistently been above economic levels though the excess has been lessened during recent months. The report gives consideration to the probable actual inventories as they exist on March 1 based on current preliminary data, approximately 57,498,000 bbls. Thereafter, a trend toward a more rational basis is shown, placing the June 30 quantity at 50,428,000 bbls. Although this figure is 10,000,000 bbls. below June 30, 1932, the levels of operations indicated should not be difficult of accomplishment.

Motor Fuel Demand

It is estimated that the total demand for motor fuel during the first half of 1933, compared with the same period of 1932, will decline 7.6 per cent—22,000,000 bbls.; that domestic demand will be reduced 4.8 per cent—15,250,000 bbls.; and that exports will be lower by 31.4 per cent—6,750,000 bbls.

This large decrease in exports reflects not so much a decline in the foreign demand for motor fuel as it does a shift in the sources supplying these foreign markets.

TABLE 1—SUMMARY OF FORECAST OF DEMAND, ECONOMIC STOCKS AND REQUIRED SUPPLY

January 1 to June 30, 1933 (Forecast) vs. January 1 to June 30, 1932 (Actual)
(In thousands of barrels)

Item—	1st. quarter 1933 Total	1st. quarter 1933 % change	2nd. quarter 1933 Total	2nd. quarter 1933 % change	Six months Total	Six months % change
Motor Fuel (Details Table 2)						
DEMAND:						
Total	84,700	—6.3	100,700	*—8.7	185,400	*—7.6
Domestic	77,400	—4.6	93,500	*—5.0	170,900	*—4.8
Exports	7,300	—20.7	7,200	—39.7	14,500	—31.4
STOCKS:						
Change during period	+5,920	....	—8,360	....	—2,440	....
Beginning of period	52,868	....	58,788	....	52,868	....
End of period	58,788	..	50,428	....	50,428	....
SUPPLY:						
Total	90,620	—11.8	92,340	—15.8	182,960	—13.9
From imports	....	....	....	....	....	....
From U. S. producers	90,620	—8.6	92,340	—12.6	182,960	—10.7
Straightrun	43,270	—10.3	43,980	—16.6	87,250	—13.6
Cracked	38,420	—6.3	39,690	—9.0	78,110	—7.7
Natural gasoline	8,630	—10.0	8,370	—6.9	17,000	—8.5
Benzol	300	—10.8	300	+6.9	600	—5.7
Crude Oil						
DEMAND:						
Total	200,580	—2.3	199,590	—13.0	400,170	—7.9
Exports	6,000	—8.3	6,600	—23.3	12,600	—16.7
Domestic	194,580	—2.6	192,990	—12.6	387,570	—7.8
Runs to stills	190,080	—4.4	188,490	—13.6	378,570	—9.2
Used as such	2,700	....	2,700	...	5,400	....
Transfer to fuel (Calif.)	1,800	....	1,800	....	3,600	....
STOCKS:						
Beginning of period	338,718	....	.....	....	.....	....
End of period	.....	....	.....	....	.....	....
SUPPLY:						
Total	200,580	—2.3	199,590	—13.0	400,170	—7.9
From imports	7,800	—31.9	7,000	—66.1	14,800	—53.8
From domestic production and stocks	192,780	—0.6	192,590	—7.7	385,370	—3.3
DAILY AVERAGE DOMESTIC CRUDE OIL REQUIREMENTS: (From production and stocks)	2,140	—0.6	2,120	—7.7	2,130	—3.3

Note—Per cent change calculated on daily average basis due to February, 1932, having 29 days.

*These percentage changes not only take into account wherever necessary the fact that February, 1932, contained 29 days but also the fact that shipments during June, 1932, were abnormally high to the extent of approximately 5,700,000 bbls. due to the purchase of large quantities of motor fuel early in June in anticipation of the Federal 1-cent tax.

TABLE 3—CLASSIFICATION OF STOCKS OF MOTOR FUEL INDICATED IN TABLE 2
(In thousands of barrels)

Date—	At refineries	At terminals and in transit	In pipe lines	Unblended natural gasoline at refineries, at plants and blends at plants	Total motor fuel stocks
December 31, 1932	35,404	13,063	1,198	3,203	52,868
January 31, 1933	37,200	13,000	1,300	3,368	54,768
February 28, 1933	39,500	13,200	1,300	3,498	57,498
March 31, 1933	40,280	13,500	1,300	3,708	58,788
April 30, 1933	38,370	13,600	1,400	3,798	57,168
May 31, 1933	35,960	13,800	1,400	3,748	54,908
June 30, 1933	31,400	14,000	1,400	3,628	50,428

The supply required to meet the demand forecast after allowing for a reduction in stocks to economic levels is 182,960,000 bbls., which is 13.9 per cent below actual supply for the first six months of 1932.

Changed refinery methods and the relative values between gasoline and other refined products has been responsible for the reduced per cent of straightrun gasoline now being manufactured. The report, therefore, contains an estimate of 23.1 per cent for straightrun yield compared with 24.2 per cent during the first half of 1932. The direct result of this decrease in straightrun yield is to increase the proportion of cracked gasoline in the refinery output.

The imposition of an excise tax on June 21, 1932, and its recent clarification has eliminated foreign motor fuels as a source of supply for the United States.

Crude Oil

The required crude runs to stills are estimated at 2,090,000 bbls. per day for the six-month period. However, from March 1 to the end of the period the daily runs should not exceed 2,070,000 bbls. This would indicate that a reduction of approximately 90,000 bbls. per day is necessary from the rate of operations during the week ended February 18, 1933.

The principal demand for crude oil other than that charged to stills is for export, which is estimated to decrease 1,579,000 bbls.—10.7 per cent. The requirements of domestic crude oil total 385,370,000 bbls., a decrease of 3.3 per cent from the first half of 1932. This is a daily average of 2,130,000 bbls., which represents the amount to be supplied from production and stocks. In this connection the board of directors of the Institute recently stated "current production should not exceed demand and should make some allowance for withdrawals from storage. . . ." Recent field reports indicate an unwarranted increase in crude oil production.

Gas and Fuel Oil

The supply of gas and fuel oil which the indicated level of crude runs to stills will produce should be adequate to meet the demand of the logical markets for these products.

General

The recent annunciations of the board of directors of the Institute pertaining to production, demand and inventories of crude oil are applicable to the refining branch of the industry.

This report is based upon the liquidation of surplus product inventories and conservative levels of operation.

J. A. Hull Co. Proposes to Build Refinery in Kansas

J. Arthur Hull Co. of Tulsa has made tentative plans for the building of a 400 to 500-bbl. refinery near Winfield, Kans. Although the type of equipment has not been decided upon, it is planned to include cracking facilities, in a combination unit. The company is now operating a 5,000-gallon natural gasoline plant near Winfield under the name of the Kansas Gasoline Co. It also operates retail outlets in the vicinity of Winfield. The company has its own crude production in the local field and this oil will be processed in the proposed plant.

TABLE 2—DETAILS OF FORECAST OF DEMAND, ECONOMIC STOCKS AND REQUIRED SUPPLY OF MOTOR FUEL, JANUARY 1, 1933 TO JUNE 30, 1933—BY MONTHS
(In thousands of barrels)

	January	February	March	Three mo.	April	May	June	Three mo.	Six mo.	Six mo., 1932 actual
Demand—Total	28,900	26,000	29,800	84,700	31,650	33,950	35,100	100,700	185,400	*207,401
Domestic	26,400	23,500	27,500	77,400	29,300	31,500	32,700	93,500	170,900	*186,150
Exports	2,500	2,500	2,300	7,300	2,350	2,450	2,400	7,200	14,500	21,251
Stocks—Change during period	+1,900	+2,730	+1,290	+5,920	—1,620	—2,260	—4,480	—8,360	—2,440	+6,149
Beginning of period	52,868	54,768	57,498	52,868	58,788	57,168	54,908	58,788	52,868	54,339
End of period	54,768	57,498	58,788	58,788	57,168	54,908	50,428	50,428	50,428	60,488
Supply—Total	30,800	28,730	31,090	90,620	30,030	31,690	30,620	92,340	182,960	213,550
From imports	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,634
From U. S. producers	30,800	28,730	31,090	90,620	30,030	31,690	30,620	92,340	182,960	205,916
Straightrun	14,750	13,750	14,770	43,270	14,290	15,090	14,600	43,980	87,250	101,521
Cracked	12,970	12,190	13,260	38,420	13,830	13,650	13,210	39,690	78,110	85,089
Natural gasoline	2,980	2,690	2,960	8,630	2,810	2,850	2,710	8,370	17,000	18,681
Benzol	100	100	100	300	100	100	100	300	600	625
Probable straightrun yield	22.5%	22.8%	23.0%	22.8%	23.0%	23.5%	23.5%	23.3%	23.1%	24.2%
Required crude runs to stills—Total	65,600	60,310	64,210	190,080	62,140	64,210	62,140	188,490	378,570	419,158
Daily	2,110	2,150	2,070	2,110	2,070	2,070	2,070	2,070	2,090	2,303

*Includes actual shipments during June, 1932, which were, however, abnormally high to the extent of perhaps 5,700,000 bbls. (See note on Table 1.)

Motor Fuel Consumption Until July Is Estimated by Federal Oil Conservation Committee

WASHINGTON, D. C., Mar. 6.—As chairman of the Federal Oil Conservation Board, Secretary Wilbur, of the Department of the Interior, made public a report or survey just compiled by the Board's Voluntary Committee on Petroleum Economics. The report treats of probable motor fuel and crude oil requirements for the period beginning January 1, 1933, and ending June 30, 1933.

The personnel of the Voluntary Committee on Petroleum Economics is as follows: John W. Frey, Department of Commerce, chairman; Robert E. Allen, assistant oil umpire, Los Angeles; W. H. Linton, Sun Oil Co., Philadelphia; Clarel B. Mapes, Mid-Continent Oil and Gas Association, Tulsa; and Sidney A. Swensrud, Standard Oil Co. of Ohio, Cleveland.

The report follows:

The Volunteer Committee on Petroleum Economics in accordance with the resolution of the board of directors of the American Petroleum Institute has made and herewith submits a survey of probable motor fuel and crude oil requirements during the six months' period beginning January 1, 1933, and ending June 30, 1933. The first three months of the period is a revision of the estimates released November 11, 1932.

Demand for Motor Fuel

It is estimated that the total demand for motor fuel during the six months' period, ending June 30, 1933, will be 177,400,000 bbls., or a decline of 12.4 per cent from the adjusted figures of the corresponding period of a year ago. The total domestic demand is estimated at 164,000,000 bbls., or 9.5 per cent less than the same period in 1932. In this connection it should be noted that the committee has not used the actual figures for June, 1932, as they were greatly augmented by the anticipated Federal gasoline tax which went into effect late in June. It has been calculated that the June domestic demand figure was at least 5,000,000 bbls. greater than that normal to the month, accordingly the six months' figures have been adjusted to that extent.

The committee again calls attention to the relationship between domestic motor fuel demand and the number of automotive units in use at any given time. The ratio of units withdrawn from use to that of units placed on the road will be about three to one during the period under review. While official registration figures are not yet available for 1933, preliminary figures indicate a decline of more than 6 per cent. The decline in registration of trucks and passenger cars is very similar. It is significant to the petroleum industry that the trend in the reduction of cars on the highways is accumulative in its effect; the curve of reduction is steepened by the failure of added cars to flatten out. If the number of cars sold in 1933 does not exceed that of 1932 the total number of cars on the road will shrink more than 200,000 a month. This means a withdrawal of gasoline consumption supporters at the average rate of approximately 1 per cent a month. It can not be urged too strongly that the petroleum industry should do everything possible to adjust its economic set-up to the trend in automobile use.

As the domestic demand for motor fuels in January, 1933, appears to have been higher than the trend of the preceding months it should be explained that this is not interpreted as a reversal in trend but as an inflated demand due to the stocking up by distributors. As far as the foreign demand for motor fuel is concerned there appears to be nothing that will markedly change the present trend and the reduction is anticipated to be nearly 40 per cent compared with the same period in 1932. Should the present low prices prevail for any long period exports might be increased a few million barrels.

Imports of gasoline, as such, have become an almost neligible figure and with an excise tax of 2½ cents a gallon there is little likelihood that, at present prices of the product or even a considerable increase in the price, there will be any appreciable upward movement in imports.

New Motor Fuel Supply

After making allowance for the blending of 600,000 bbls. of benzol, the use of 4,600,000 bbls. of natural gasoline (used as such) and the blending of 11,600,000 bbls. of natural gasoline at refineries and an increase in stocks of 2,000,000 bbls. we find that 152,600,000 bbls. will be needed from the refining of crude petroleum. Putting this just a little differently, gasoline refined from crude petroleum, plus natural gasoline blended at refineries, should total 174,200,000 bbls., or 15 per cent less than in the same period of 1932.

While the percentage yields of gasoline from crude petroleum are now low it is anticipated that the yields will increase as the passing of winter weather takes away the demand for heating oils. So while the percentages for January and February are placed at 43, the second quarter is placed at 45. The committee recognizes that this is not the highest yield of which the industry is capable.

Stocks of Motor Fuel

In the report of November 11, 1932, the committee suggested a stock level of 54,170,000 bbls. as of March 31, 1933. This level was passed by the end of January. The trend in stocks during the first quarter is upward but withdrawals to reduce stocks in the second quarter are recommended with an ultimate stock figure of 54,868,000 bbls. as of June 30, 1933. California stocks of motor fuel were pointed out in the November report as outstandingly uneconomic. As motor fuel stocks in California have become increasingly worse during the winter and as they are completely out of line with any reasonable demand nothing could be more obvious than the necessity of reducing them.

Crude Oil Requirements and Supply

The committee has not attempted to indicate the required production of crude oil but has stopped at the point of indicating a demand for 370,900,000 bbls., a reduction of 8.4 per cent from that of the same period last year.

Part of this oil probably will be withdrawn from storage. On December 31, 1932, crude oil stocks were 338,718,000 bbls. With an indicated demand of 2,049,000 bbls. daily this represents 165 days' supply. Surely it is not necessary to store that amount. The industry will, no doubt, work toward a reduction in stocks. A production of 2,000,000 bbls. per day, taking all oil recorded and otherwise into account, would make a reduction of stocks of 8,000,000 bbls. As there is no evidence that there is any likely upward movement in demand for petroleum products in the near future and there is strong reason to believe that the demand will, at least for the period under consideration, continue to decline, it would hardly seem necessary to point out that the trend of petroleum production and petroleum refining should follow the trend of consumption.

General Lowering of Crude Oil Prices in California and Revision Elsewhere

The Texas Company, through its president, R. C. Holmes, issued a statement on Saturday that it would pay 75 cents per barrel for Mid-Continent crude oil if production in the United States is brought down to 1,985,348 bbls., or less, on or before April 10, the production stated being what Mr. Holmes believes to be the required volume to meet refinery requirements. Pending the action of producers in the United States, The Texas Company, which has been paying a higher price in South Texas and the Texas Panhandle than other purchasers, would readjust its prices in those areas.

Mr. Holmes' statement in full was as follows:

"Since January 20, 1933, The Texas Company has been paying from 8 cents to 12 cents per barrel higher for crude oil in South Texas than the prices posted by other large buyers, and now in the Panhandle section substantially the same conditions exist. Effective March 6, we will reduce our postings to meet this competition.

"If on April 1, 1933, or any date prior to April 1, the authorities of the States of Texas and Oklahoma shall have fixed the allowable of crude production in line with reasonable market requirements and shall have prevented entirely the production of oil in excess of such allowable The Texas Company will post a price of 75 cents per barrel from 35 to 35.9 grav-

(Continued on Page 32)

ESTIMATES OF MOTOR FUEL AND CRUDE PETROLEUM DEMAND, SUPPLY AND STOCKS IN THE UNITED STATES DURING THE FIRST HALF OF 1933

(In thousands of barrels of 42 U. S. gallons)

	January	February	March	First quarter	April	May	June	Sec. quarter	Total 6 months	Same period 1932 June figures revised† Total	Pct. change
Motor fuel requirements—											
Domestic demand	26,500	23,500	26,000	76,000	27,800	30,000	30,200	88,000	164,000	181,150	—9.5
Export demand	2,250	2,100	2,150	6,500	2,300	2,300	2,300	6,900	13,400	21,251	—36.9
Total	28,750	25,600	28,150	82,500	30,100	32,300	32,500	94,900	177,400	202,401	—12.4
Stock changes	+2,000	+2,200	+1,000	+5,200	.....	—1,100	—2,100	—3,200	+2,000	+10,927	—81.7
Net new supply required	30,750	27,800	29,150	87,700	30,100	31,200	30,400	91,700	179,400	211,358	—15.1
Source of new supply—											
Nonrefinery sources:											
Imports	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,634	
Benzol	100	100	100	300	100	100	100	300	600	659	— 9.0
Natural gasoline as such	700	700	800	2,200	800	800	800	2,400	4,600	6,589	—30.2
Nonrefinery sub total	800	800	900	2,500	900	900	900	2,700	5,200	14,882	—65.1
Refinery output:											
Natural gasoline blended	2,100	1,900	1,900	5,900	1,900	1,900	1,900	5,700	11,600	12,092	— 4.1
Cracked gasoline	13,100	11,800	12,400	37,300	12,800	13,300	13,000	39,100	76,400	83,914	— 9.0
Straightrun gasoline	14,750	13,300	13,950	42,000	14,500	15,100	14,600	44,200	86,200	100,470	—14.2
Refinery sub total	29,950	27,000	28,250	85,200	29,200	30,300	29,500	89,000	174,200	196,476	—11.3
Total new supply	30,750	27,800	29,150	87,700	30,100	31,200	30,400	91,700	179,400	211,358	—15.1
Crude oil requirements—											
Domestic runs to stills	65,000	58,500	60,000	183,500	60,500	63,000	61,500	185,000	368,500	419,158	—12.1
Exports	1,900	1,800	2,000	5,700	2,300	2,500	2,500	7,300	13,000	14,220	— 8.6
Miscellaneous use and losses	900	900	900	2,700	900	900	900	2,700	5,400	3,945	+36.9
Total requirements	67,800	61,200	62,900	191,900	63,700	66,400	64,900	195,000	386,900	437,323	—11.5
Estimated imports	2,800	2,500	2,800	8,100	2,800	2,800	2,800	8,400	16,500	32,244	—48.8
Indicated requirements of domestic crude from production and/or stocks	65,000	58,700	60,100	184,300	60,900	63,600	62,100	186,600	370,900	405,079	— 8.4
Daily crude oil required‡	2,097	2,096	1,939	2,048	2,030	2,052	2,070	2,051	2,049	2,226	— 8.0
	Dec. 31, 1932	January 31	February 28	March 31		April 30	May 31	June30			
Motor fuel stock levels*	52,868	54,868	57,068	58,068	.....	58,068	56,968	54,868	.....	.....	
Percentage yields assumed for total cracked and straightrun gasoline on crude runs to stills	.....	43	43	44	.....	45	45	45	.....	.....	

*Includes refinery gasoline at refineries at bulk terminals, in transit, and in pipe lines; and natural gasoline at refineries, and at natural gasoline plants, including blends.

†Anticipating a Federal tax, effective June 21, of 1 cent a gallon on gasoline, the June, 1932, shipments from refineries were far larger than normal June requirements. It is estimated that the normal demand for June was about 5,000,000 bbls. less than the indicative figure of 39,000,000. In adjusting the figures for the first half of 1932 5,000,000 bbls. have been deducted from domestic demand and the stock figures have been increased by the same amount.

‡No attempt has been made to determine the amount that should be produced or drawn from storage.

Dickey Plant at McPherson Combines Topping and Cracking in One Continuous Operation

By C. O. WILLSON

The Dickey Refining Co., Wichita, Kans., is now operating on a continuous basis, its new refinery at McPherson, Kans., the first to be completed in that section of the State in which there have been important discoveries in new oil fields over the past 18 months.

The refinery, which has a rated crude oil capacity of 3,500 bbls. daily, furnishes an up to date example of the results obtainable with relatively small compact plants in which every advantage is taken in design to secure an operating efficiency comparable to refineries of larger capacity. The Dickey plant has complete facilities to top the crude oil of its light fractions and crack the heavier fractions with a commercial grade of fuel oil as the only residual product.

This combined topping and cracking is obtained in one continuous operation with one furnace. No rerunning is required in making any of the products suitable for market.

The plant is now being operated with crude oil from the near-by Ritz-Canton Field where the Dickey Oil Co. is a large producer. This crude oil is topped of its gasoline, naphtha, kerosene and when desired, the distillate fraction with the waste heat from other phases of the plant operation. In operation, the crude oil is charged through a series of vapor heat exchangers where the crude is preheated by the vapors from the gas oil charging stock and the cracked gasoline. Through this heat exchange the crude is brought to a temperature between 500° and 550° F. and discharged in the bottom of a 6'x58' bubble tower.

Flexible Operation

This tower has 24 decks with 20-inch spacing and 88 caps to the tray. From this tower one overhead and two side streams are taken. The specifications of these streams are changed to meet market requirements. At present the overhead stream is a gasoline cut with an endpoint under 400° F. The top side cut from the tower is a 450° endpoint naphtha and the bottom cut is a 42-44 gravity kerosene. The gasoline cut from the crude oil averages 30 per cent, naphtha 6 per cent and kerosene 11 per cent. The specifications of the overhead and side cuts is determined by automatically controlled reflux from the finished steams.

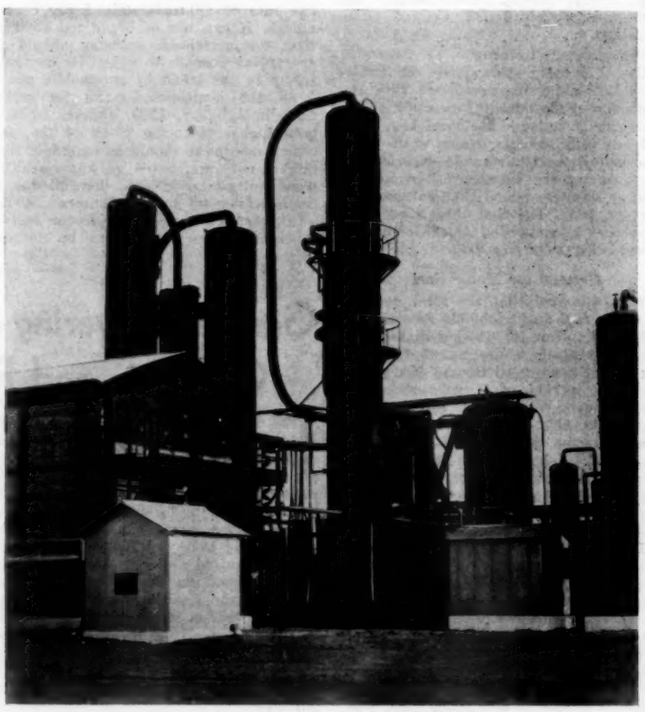
The tower can also be operated to take a 437 endpoint gasoline overhead. In this method of operation the top side stream is a kerosene cut and the bottom cut is a 38-40 light straw distillate. The bottoms from this tower furnish the stock for the reacking operation being picked up by a hot oil pump and charged to a primary coil in the furnace and then discharged into an evaporator. The gas oil charging stock for the cracking operation is taken overhead in the evaporator and the residuum is a low gravity fuel oil suitable for industrial uses. The cracking operation is carried on at a pressure of 400 pounds with a discharge temperature from the cracking coil of 1,000° F.

A large part of the condensation of the overhead cuts in the reducing and cracking operations is made possible through the use of the vapor heat exchangers. The final condensation is accomplished with water in closed condensers.

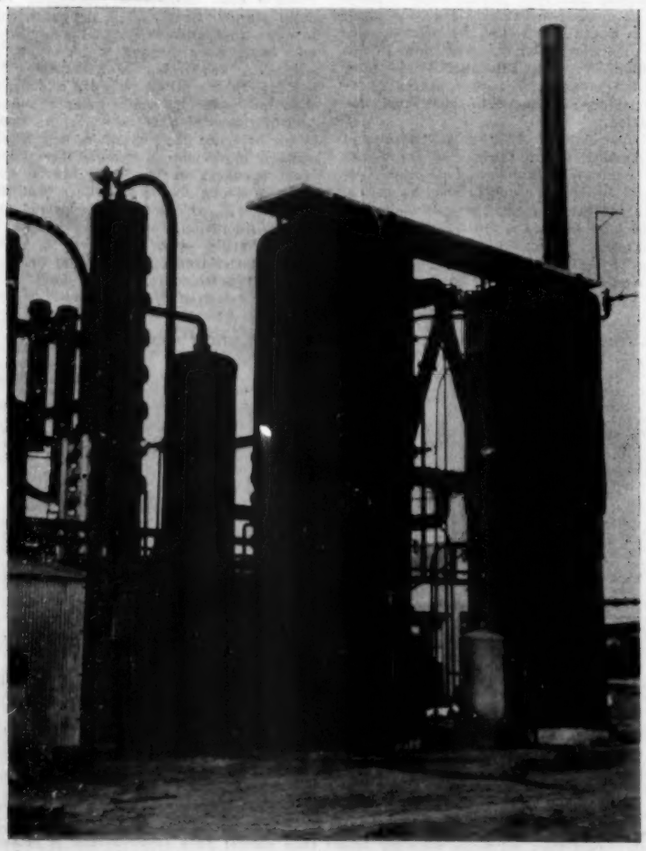
The cracked gasoline in the vapor phase is treated in two Gray towers. This gasoline cut after a sweetening treatment is better than 30 color and stable with an octane number on the finished cracked gasoline of around 70 octane. The plant is operated by three men per shift including the boiler firemen.

Steam for the plant is furnished by two Union water tube 250-horsepower boilers. An adequate water supply is obtained from the city of McPherson. The refinery has new tankage for all types of storage and is now installing additional crude oil tanks connected by its own pipe line system to the Dickey production.

George Dickey, independent producer of Wichita, built the plant. Ellis G. Slack is in charge of refinery and sales. E. L. Rogers is plant superintendent.



Combination skimming and cracking plant equipment in operation at McPherson, Kans. refinery of the Dickey Refining Co.



Installation of Gray towers for vapor phase treating of cracked gasoline at plant of the Dickey Refining Co., McPherson, Kans.

Stripper Well Oil Producers Organize to Combat Destructive Legislation

The large assembly hall of the Tulsa Chamber of Commerce was filled with oil producers Friday evening, March 3, for the purpose of taking action on pending tax legislation affecting the oil industry in Oklahoma.

It was an interesting assemblage, and should have been seen by members of the legislature who believe that the oil industry is made up of large corporations, and whose experience with oil wells is confined largely to the gusher wells of Oklahoma City.

The men assembled Friday night ranged in age from 30 to 80 years, and it is safe to say that they averaged over 50 years. Practically all of them have retired from the active life of the wildcatter which they once pursued to a greater or less extent, and settled down to nursing along their stripper wells (the only kind of wells they own). They ask only that they be permitted to make a decent living out of the properties that they have developed and which are now representative of half the oil wells in the State.

These men hope, if they are not taxed out of business, to maintain this old production as long as their wells will respond to the pump, even though they are not able to make their properties pay during these days of potential overproduction and low prices. Their object in getting together was to protect themselves from industrial extinction.

A bill was introduced recently in the Oklahoma state legislature amending the gross production tax bill applicable to oil and natural gas. It provided that while the 3 per cent tax on oil production continue when crude oil is selling for $1 per barrel or more, 3 cents per barrel flat be

(Continued on Page 31)

Disturbing Factors May Alter Present Crude Oil Schedules of the Mid-Continent Refineries

By W. T. ZIEGENHAIN

Mid-Continent refinery operations during March will progress at about the same rate as during February if schedules are permitted to be maintained as at present, but two important factors have entered the course of things that will be bound to exert an important influence before the end of the month. One of these is the closing of the Oklahoma City Field, and the other the inability of refiners to find purchasers of their products who have sufficient ready cash or credit to circumvent the present national banking moratorium. Some influence will also result from the persistent overproduction of certain important wells in the East Texas Field.

Ignoring what influence these factors might have on Mid-Continent refinery operations later in the month, March refinery crude runs will approximate 417,445 bbls. daily compared with 407,125 bbls. in February, or will show an increase of 10,320 bbls. daily.

Oklahoma, East Texas and Kansas will run approximately 23,000 bbls. more crude per day during the month but this is materially reduced by the substantial reductions made in West Texas operations and in the reduced runs in Arkansas.

Most noticeable in the shifting of refinery operations at present is the building of small plants at numerous points where local crude is available and where there is a local market sufficient to absorb the small output of finished products.

Mid-Continent Refinery Operations

Scheduled Average Daily Crude Runs

	1929	1930	1931	1932	1933
January	508,550	535,460	478,795	405,910	399,405
February	506,800	519,355	470,125	411,280	407,125
March	514,950	531,500	449,634	401,155	417,445
April	530,530	555,250	497,391	419,750	.....
May	577,500	574,300	510,640	436,160	.....
June	583,030	572,250	567,915	440,765	.....
July	565,800	548,475	588,840	433,255	.....
August	555,250	526,400	590,545	427,710	.....
September	552,300	498,710	588,105	430,430	.....
October	544,720	518,800	472,190	401,995	.....
November	545,473	506,700	480,440	408,180	.....
December	540,630	478,360	456,525	416,275	.....

Operations by Districts

	March 1 Dy. crude capacity (bbls.)	March Dy. crude runs (bbls.)	February Dy. crude runs (bbls.)	March daily increase (bbls.)
Arkansas	48,000	17,500	20,800	*3,300
Kansas	161,500	85,350	78,900	6,450
North Louisiana	41,000	26,650	27,100	*450
Oklahoma	309,900	148,900	138,750	10,150
North Central Texas	216,400	77,405	77,360	45
West Texas	144,100	27,785	37,220	*9,435
East Texas	86,850	33,855	26,995	6,860
Total	1,007,750	417,445	407,125	10,320

*Decrease.

Oklahoma Operations

Oklahoma plants will process approximately 10,000 bbls. more crude daily this month than last if the increased schedules of the Oklahoma City plants may be maintained. The Oklahoma City Field was closed at noon on March 4 with exception of water wells from which there is a production of only about 12,000 bbls. of oil daily. Except for the relatively small stocks of crude in that area, most of which is in the hands of companies operating pipe lines and refineries away from the Oklahoma City area, there is not sufficient reserves to permit full operation of all local plants throughout the month.

This curtailing of crude production there will also affect other refineries in the Mid-Continent, but stocks are sufficiently high in most instances to permit the present schedules to be continued at least 30 days.

Actual construction work was started this week at the Marathon Oil Co.'s plant at Bristow. This will include a topping and cracking unit and vapor recovery plant. Present plans call for completion of the work June 1.

Kansas

Kansas refineries have also increased their total runs for March but this is accounted for principally by the starting up of the Globe Oil & Refining Co.'s new 6,000-bbl. plant at McPherson. For the past month the stills have been operated slowly to permit a gradual heating of the settings and curtailed operations may extend on through the greater part of March. The March runs in Kansas as a total will be 85,350 bbls. daily compared with 78,900 bbls. daily during February.

East Texas

East Texas refineries continue to increase in number and in March the 34 plants will process about 33,855 bbls. daily. This represents an increase of about 7,000 bbls. daily compared with the previous month. To the list of active plants has been added the Carnation Refining Corp. at Gladewater and the Recla Refining Co. at Turnerstown. Two changes in names also appear on the list, namely, the Solar Refining Co., formerly the East Texas Refining Co., and the Henderson Refining Co., formerly applied to the East Texas Refining Co.'s plant at Henderson.

In many instances the schedules of individual plants have been increased materially over those of a month ago, but these schedules are always subject to drastic changes. At the present time several companies are producing considerably more crude than allowed and there is a feeling that a more liberal production schedule will automatically follow soon even if proration is continued in force indefinitey. In that case considerably higher runs may be anticipated for a short while.

West Texas

Two more plants have been added to the list of idle West Texas refineries in March. These include the Marathon Oil Co.'s plant at Del Rio and the West Texas Refining Co.'s plant at Pecos. In addition to the effect of these on the total runs there has been a general curtailment of refinery operations in the area to bring the total crude runs for the area down to 27,785 bbls. daily for March. This compares with 37,220 bbls. during February.

North Central Texas

The runs of the North Central Texas group of refineries will not change greatly during March when compared with those of February. The schedules of several plants have been materially altered to permit construction work but this has been equalized by increases in others. The Continental Oil Co. has reduced its runs at Wichita to 1,200 bbls. daily to facilitate construction of a new vapor recovery plant and other auxiliary equipment.

Arkansas and North Louisiana

The Arkansas and North Louisiana group of refiners will process approximately the same quantity of crude daily as during February. Included in the changes in the operations of the individual plants is the shutting down of the Kettle Creek Refining Co.'s plant at Pearson and shutting down of the Bayou State Refining Co.'s plant at Hosston.

REFINERY OPERATIONS IN EAST TEXAS

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Aver. daily runs Mar.	Aver. daily runs Feb.
Alamo Refining Co., Camps Switch	2,500	2,200	800
Arp Refining Co., Arp	500	900	800
Arrow Refining & Producing Co., Overton	2,500	1,700	2,000
Beacon Oil & Refining Co., Henderson	4,500	3,500	3,000
Canyon Refining Co., Kilgore	200	50	50
Carnation Refining Corp., Gladewater	200	150	(*)
Central Refining Co., Friars Switch	7,500	(*)	(*)
Cook (R. X.) Gladewater	200	100	100
East Texas Refining Co., Longview	10,000	2,750	2,000
Gladetex Refining Co., Gladewater	500	(*)	30
Gregg Refining Co., Gladewater	300	170	150
Henderson Refining Co., Henderson	6,000	(*)	(*)
Johnsonville Refining Co., Omega	200	60	50
Kilgore Refining Co., Kilgore	1,500	2,200	2,000
Lake Refining Co., Gladewater	500	200	180
Locke Refining Co., Gladewater	200	130	140
Overton Refining Co., Overton	3,500	2,400	2,000
Panama, Kilgore	250	150	150
Pennant Refining Co., Kilgore	250	150	130
Petroleum Refractionating Co., Longview	10,000	(*)	(*)
Recla Refining Co., Turnerstown	200	25	(*)
Reese Refining Co., Arp	200	50	50
Rusk Refining Co., Overton	3,000	1,000	1,600
Sabine Refinery Co., Gladewater	200	250	200
Shoreline Refining Co., Kilgore	200	220	200
Sinclair Refining Co., Camps Switch	5,000	1,100	1,000
Solar Refining Co., Overton	3,000	300	375
Southern Oil Refining Co., Reeds Switch	2,500	1,000	1,000
Taylor Refining Co., Tyler	15,000	12,000	8,000
Texas Oil Products Co., Gladewater	1,000	800	(*)
Trinity Refining Co., Gladewater	350	210	190
Unit Refining Co., Kilgore	200	90	(*)
V.O.E. Refining Co., Gladewater	500	(*)	500
V.O.E. Refining Co., Big Sandy	2,000	(*)	(*)
Total	86,850	33,855	26,995

*Shut down.

REFINERY OPERATIONS IN WEST TEXAS

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Aver. daily runs Mar.	Aver. daily runs Feb.
Bluebonnett Oil Refining Co., Wickett	5,000	100	100
Bobrose Oil & Refineries, Luling	2,500	300	(*)
Coltex Refining Co., Colorado	10,000	5,000	4,500
Concho Refining Co., San Angelo	500	50	50
Cosden Oil Co., Big Spring	15,000	4,500	4,500
Pentex Refining Co., Echo	400	50	50
Grayburg Oil Co., San Antonio	6,000	500	500
Great West Refining Co., Big Spring	8,500	(*)	(*)
Gulf Refining Co., Sweetwater	5,000	4,000	3,400
Howard County Refining Co.	2,500	500	500
Humble Oil & Refining Co., San Antonio	5,000	1,325	1,360
Humble Oil & Refining Co., McCamey	15,000	(*)	(*)
Magnolia Petroleum Co., Luling	7,000	3,500	3,500
Marathon Oil Co., Del Rio	5,000	(*)	1,600
Mentone Oil & Refining Co., Mentone	300	100	100
Moutray Refining Co., Hawley	500	200	200
Misko Refineries, Inc., Laredo	1,500	800	800
Octane Refining Co., Beard	2,000	1,000	1,000
Paramount Refining Co., San Angelo	2,000	700	500
Pasotex Petroleum Co., El Paso	14,000	(*)	6,000
Phoenix Refining Co., Pettus	800	500	800
Phoenix Refining Co., Laredo	600	300	450
Pioneer Oil & Refining Co., Somerset	1,500	1,000	1,000
Richardson Refining Co., Big Spring	6,000	(*)	(*)
Rio Grande Oil Co., El Paso	6,000	500	500
Signal Gasoline Co., Texon	500	(*)	(*)
The Texas Company, San Antonio	3,000	1,000	1,000
The Texas Company, El Paso	2,000	500	500
Tonkawa Petroleum Co., Pyote	5,000	(*)	(*)
Texas Petroleum Products Co., Somerset	1,500	400	400
West Texas Refining Co., Pecos City	6,000	(*)	3,000
Wickett Petroleum Co., Wickett	2,500	800	800
White Star Refining Co., Cisco	500	160	160
Total	144,100	27,785	37,220

*Shut down.

(Continued on Page 33)

Careful Study of Geology of Eastern Colorado Indicates Many Oil and Gas Possibilities

By R. M. VAN TUYL[1] and BEN H. PARKER[2]*

[1]Professor and Head of the Department of Geology, Colorado School of Mines. [2]Consulting Geologist, Golden, Colo.

Ever since the moderate success attendant upon the pioneer efforts to develop a commercial oil field in the Florence district in the sixties of the last century, oil operators and geologists have recognized the possibilities for oil development in and near the foothills of the Rockies. Following the discovery and development of the main Florence oil field in the late eighties and early nineties and of the Boulder Field soon after 1900 the conviction that eastern Colorado contained important oil resources became sufficiently strong that a few venturesome spirits drilled wildcat wells far out on the plains. Almost without exception these tests were not located upon the basis of favorable geology and were abandoned at shallow depths.

Following the discovery of the Salt Creek and other important fields of Wyoming during the period from 1908 to 1920, and contemporaneously with the resulting boom, the attention of oil companies and independent operators was again attracted to eastern Colorado, particularly to a belt immediately east of the foothills. This resulted in the discovery of the Wellington and the Fort Collins oil fields in 1923 and 1924, respectively.

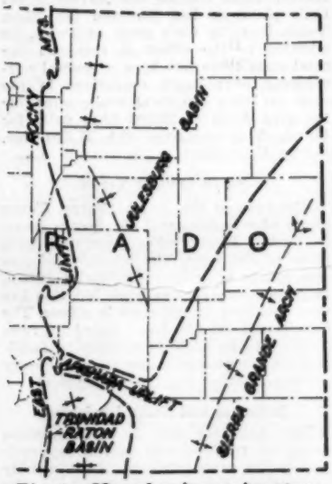


Fig. 1.—Map showing major structural features of eastern Colorado

New Activity

These events stimulated a new wave of activity in eastern Colorado during which the geology of the area received much more careful study than in preceding years. In 1924 the U. S. Geological Survey placed a party in the field in charge of Dr. K. F. Mather. The results of this study were published in preliminary form in October, 1924, and in final form in January, 1928.

In general the net results of all such studies were not sufficiently encouraging, considering the depth of drilling required in the areas considered to have oil and gas possibilities, to induce the larger companies to start development campaigns. However, a test well was started in the Greasewood Flats district of Weld County, an area mentioned as having favorable structure by Doctor Mather and his associates, by the Platte Valley Petroleum Corp., which was organized for the purpose of carrying on this particular operation. This well was spudded in in the summer of 1926 and was completed as an oil well in October, 1930. More will be said of this wildcat later as its completion marks a new era in the development of the plains area.

Two years after the discovery of oil in the Wellington-Fort Collins area, oil was developed in large quantities on the north flank of the Amarillo uplift of the Texas Panhandle. It was not long until the interest spread from this area into the Panhandle of Oklahoma and thence into southwestern Kansas and southeastern Colorado. Thus, while interest was waning in northeastern Colorado, it was rapidly gaining momentum in the south. The result was the completion of several wildcat wells in this part of the state during the next three years. The outcome was discouraging in the sense that neither oil nor gas was discovered in commercial quantities. However, the borings revealed very interesting information regarding the subsurface conditions.

Magnetometer Surveys

During the autumn of 1928 and for several years thereafter magnetometer surveys were carried on in eastern Colorado by several organizations. The results gave sufficient encouragement to justify extensive leasing campaigns. Checking operations with the torsion balance and seismograph have since been conducted at a few localities; but, in general, much work of this character, particularly with the seismograph, remains to be done.

While the geophysical surveys were being carried on the news was released in October, 1930, that the Greasewood Flats test of the Platte Valley Petroleum Corp., located in NE SE NW Section 24-6n-61w, had encountered oil at a depth of 6,667 feet in a sandstone which was later demonstrated to be the Muddy member of the Dakota group. Shortly thereafter, this well was completed as a 350-bbl. producer flowing by heads. This even, as already mentioned, constitutes a landmark in the development of the oil resources of eastern Colorado, in as much as the Greasewood well indicated definitely that oil might be expected to occur in commercial quantities far to the east of the monoclinal belt at the foot of the mountains which had been looked upon with most favor up to that time.

After producing for a period of nearly one year without appreciable diminution below a daily volume of 200 bbls., the discovery well had sufficiently demonstrated its value to encourage other operating companies to drill additional wells. The results were the early addition of two oil wells to the field and two dry holes. Two additional wells have since been completed northeast of the proven area. Both were failures.

St. Anthony Well

Within recent months, however, the St. Anthony well of the Ramsey Petroleum Co. encountered, in the Muddy sandstone at a depth of 6,680 feet, a flow of about 6,000,000 feet of natural gas. The location of this well is NE SE Section 15-7n-59w. Upon deeper drilling, a reported production of 60 to 70 bbls. of high-grade oil per day with considerable water was developed in the upper few feet of the second or Dakota sand of the Dakota group at a depth of 6,758 feet. Deeper drilling into this sand at a subsequent date, however, resulted in the oil being largely displaced by water. The well has lately been plugged back to the Muddy sand in an effort to develop commercial gas production.

At the present writing preparations are being made to deepen the Anthes well, located 6 miles northeast of the St. Anthony well in NE NE Section 24-8n-59w, to the Muddy and Dakota horizons. This well is now bottomed at a depth of 3,318 feet in the Hygiene member of the Pierre formation. The operation was started by the Tulsa-Fort Morgan Petroleum Corp., but has recently been taken over and will be completed by the Continental Oil Co., the California Co. and the Centennial Plains Oil Co., working in co-operation with the above organization. It is reported to be located slightly higher structurally than the St. Anthony well. Many geologists anticipate that it will be completed as a commercial producer from one or both of the sands encountered in the St. Anthony well.

In summarizing the history of oil development in eastern Colorado we find a great majority of the tests, except those which have resulted in successful discoveries near the foothills and in the Greasewood-New Raymer areas, have not been drilled on favorable structure and have not been carried to sufficient depth to properly test the most promising oil and gas horizons.

Geological Maps

The accompanying oil and gas field map covering eastern Colorado and adjacent areas is interesting in that it indicates something as to the possibilities of this area in comparison to the more extensively developed districts to the north, east and south. (See Figure 4.)

In general, the oil and gas structures situated in the belt adjacent to the foothills are typical Rocky Mountain structures in that the dips are so pronounced that they can be easily detected with the naked eye. The structures farther out on the plains, on the other hand, have been demonstrated to be of the low dip variety in which the inclination of the strata is measurable in feet per mile rather than in terms of degrees. In this respect the plains structures are analogous to those of the Mid-Continent region.

The development of the plains area has been greatly retarded owing to the lack of adequate exposure, over large areas, of the consolidated formations overlying the oil and gas horizons. A large proportion of eastern Colorado is covered by unconsolidated Tertiary stream gravels which do not share in the structure of the underlying Cretaceous and older deposits. Furthermore, at those localities where the Pierre shale is exposed, it is frequently so highly crumpled and contorted that its dips are wholly unreliable.

In a broad sense the area between the

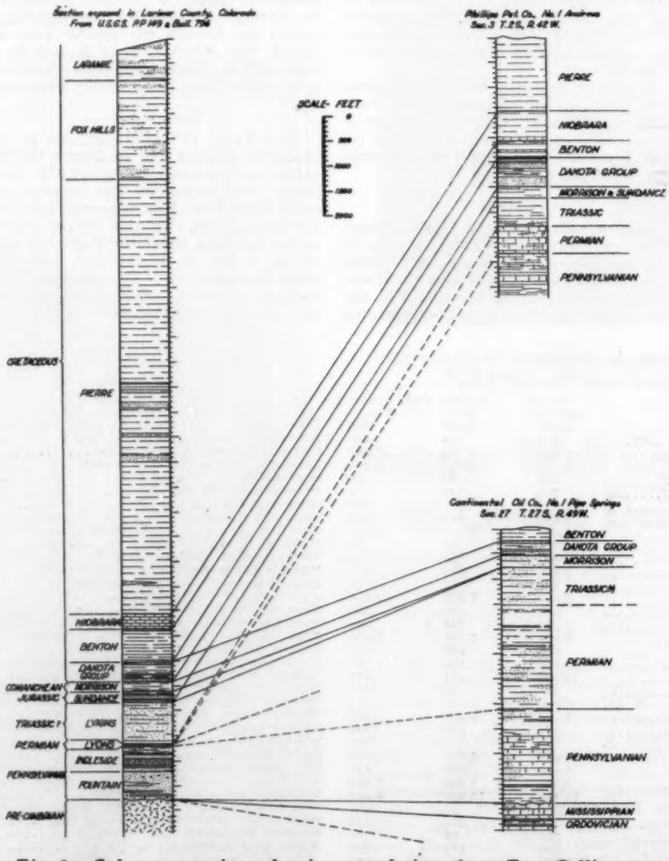


Fig. 2.—Columnar sections showing correlations from Fort Collins area in an easterly direction to the Phillips-Andrews well near Wray, Yuma County, and in a southeasterly direction to the Continental-Pipe Springs well in Bent County

*Before Joint Annual Conventions, Colorado Mining Association and Colorado Chapter American Mining Congress, Denver, Colo. The authors' title for this paper is: "Oil Possibilities of Eastern Colorado."

Rocky Mountains and the Ozark uplift is a large unsymmetrical geosyncline modified by several arches and subsidiary basins. The most important structural features in eastern Colorado are the Julesburg basin and the Sierra Grande uplift. Other structures of smaller size are the Apishapa uplift and the Trinidad-Raton Basin. The location and extent of these are shown on the accompanying map (See Figure 1). The first two are considered to be the more promising from the standpoint of oil and gas resources. The major geosyncline was formed in part by subsidence during sedimentation, mainly during Cretaceous time, and in part by deformation during late Cretaceous and early Tertiary time. The deepest part of the basin is only a few miles east of the mountain front where the Montana series of the Cretaceous and the early Tertiary continental deposits locally attain a thickness of more than 10,000 feet.

Stratigraphy

The following discussion of the stratigraphy of eastern Colorado is based in part upon exposures and in part upon the study of well samples. In the Julesburg basin the most extensive and complete outcrops occur in the foothills belt which bounds the basin on the west. The formations here are steeply tilted as a result of successive uplifts of the front range and several of the more resistant formations form hogback ridges.

The succession of formations in the vicinity of Fort Collins (see Larimer County columnar section, Figure 2) is typical for the west limb of the basin. However, the Pierre and Fox Hills formations which together are estimated to be about 10,000 feet thick, are considerably thicker in this area than at any other point in eastern Colorado. Furthermore, the sandstone members of the Pierre shale are more numerous and thicker here than elsewhere. The rate of thinning of the Pierre shale to the eastward is estimated to be about 30 feet per mile. Recent studies by the writers point toward the fact that the Pierre and Fox Hills formations represent a great delta deposit built eastward into the Cretaceous interior sea during Montana time. As a result of this great thickness of the Montana series to the east of the mountains and the appearance of Laramie and early Tertiary formations in the deeper part of the Julesburg basin in a belt extending from Greely to Denver and slightly beyond, the depth of drilling to the Muddy and Dakota sands is in excess of 8,000 feet. On the east limb of the basin, however, the depth of drilling becomes progressively less as one goes eastward. This relationship is shown in the accompanying cross sections. (See Figure 3.)

The pre-Montana Cretaceous formations (Dakota, Benton, and Niobrara) are much more uniform in character and thickness over eastern Colorado than the younger Cretaceous deposits.

Frontier Formation

The most prolific sources of oil and gas in Wyoming are the sands of the Frontier formation, notably the Wall Creek sands. These sands are of Benton age and are stratigraphically younger than the Muddy sand of northeastern Colorado. Unfortunately they do not extend into eastern Colorado. The most important post-Paleozoic productive sands of Wyoming other than those of the Frontier are the Muddy, Dakota, Lakota and Sundance. All of these are present in their normal develpoment in eastern Colorado. The Muddy sand is usually considered to represent the upper member of the Dakota group while the Lakota is considered to be upper Comanchean. For further information concerning the position of these sands in the section, the reader is referred to the columnar section of the Larimer County area. (See Figure 2.)

The Muddy sand is the producing horizon in the Wellington, Fort Collins, Greasewood and St. Anthony Fields. At the outcrop in the foothills west of Fort Collins it has a thickness of 35 feet and is separated from the main body of the Dakota by an interval of 200 feet of black shale. In the Greasewood Field the sand has a thickness of 36 feet while the underlying black shale is reduced to a thickness of 58 feet.

The sands of that part of the Dakota below the Muddy have not, at this writing, been found to contain oil or gas in commercial quantities in eastern Colorado. However, either oil residues or oil seepages have been observed in this formation at several localities. Also a good showing of oil was obtained from the Dakota sand in the St. Anthony well in Weld County. It is reported on good authority that showings of oil have been obtained from the Dakota group in several wells drilled through this formation in western Kansas. One such showing is said to have been obtained near Hill City in Graham County. It is not known to the writers whether this oil was obtained from the upper part of the formation which may correspond to the Muddy of eastern Colorado or from a lower member.

Pre-Cretaceous Deposits

Of the pre-Cretaceous deposits in the northern foothills belt only the Sundance and Fountain formations contain marine strata and can be considered to be possible source beds of petroleum. The Sundance formation is of unknown importance as a prospective oil and gas horizon because of the limited knowledge available concerning its extent and thickness. The Fountain (Pennsylvanian) is made up in large part of red sandstone and shale, but contains occasional intercalations of marine limestone which pinch out to the southward. By referring to the section penetrated in the Andrews well drilled by the Phillips Petroleum Co. near the Colorado-Kansas line, southeast of Wray, Colo., (see Figure 2), it will be observed that the Pennsylvanian is made up largely of marine limestone in this area. It is apparent that the proportion of limestone to sandstone decreases to the westward and that favorable reservoir conditions due either to the presence of porous marine or continental sandstones or to porous zones in the limestones produced during one or more erosion intervals, exist in the formation somewhere between Wray and the foothills.

The same relationship may be expected between the marine Pennsylvanian and Permian formations of the east and the interbedded marine and continental shales and sandstones of the same age in the Sangre de Cristo Range of southern Colorado. In this connection it should be borne in mind that the marine Pennsylvanian and Permian of Wyoming on the north, of Kansas on the east, and of Oklahoma and the Panhandle of Texas on the southeast are very important sources of oil and gas.

Marine Paleozoic Systems

Following southward along the foothills from northern Colorado into the Colorado Springs and Canyon City areas, older marine-Paleozoic systems (Cambrian, Ordovician and Mississippian) appear between the Fountain and pre-Cambrian formations. The recognition of similar Mississippian and Ordovician strata in the Pipe Springs well of Bent County in southeastern Colorado suggests that these strata were formerly continuous. It will be recalled that the Ordovician limestones and sandstones of Kansas and Oklahoma are known to carry large quantities of oil and gas. However, it has not been demonstrated that the relations of the Ordovician strata to possible source beds of the Mississippian and Pennsylvanian are the same in Colorado as in those states.

Regarding the present continuity of the Mississippian and older strata beneath the Pennsylvanian in southeastern Colorado, it should be pointed out that in at least two wells drilled in this part of the state, namely, the Parker Club in Section 32-34s-56w, Las Animas County, and the Table Mesa well in Section 8-30s-50w, Baca County, these systems were not represented. In the former well a course-grained igneous rock, which has been tentatively identified as syenite by the senior author was found to underlie

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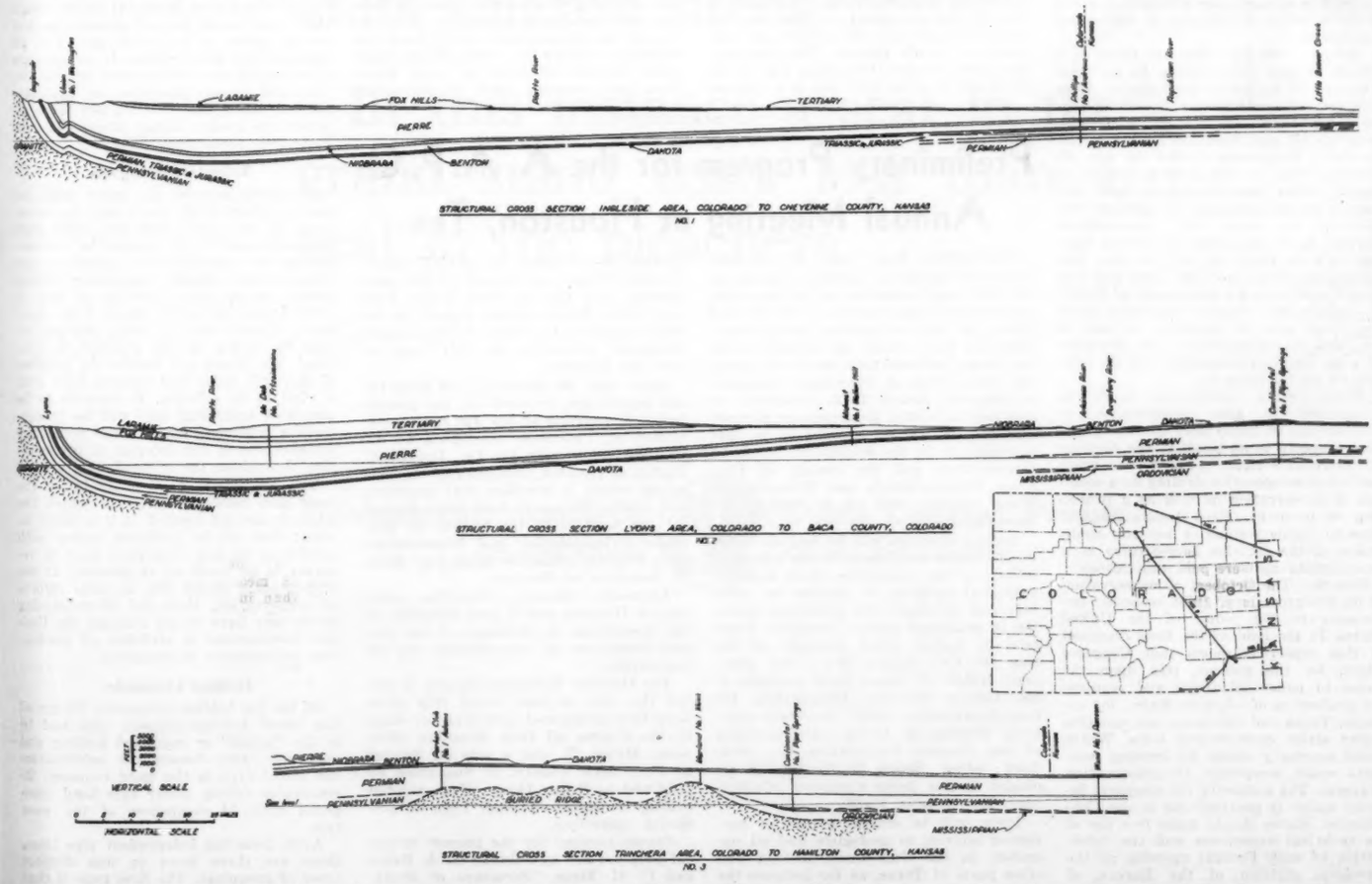


Fig. 3.—Structural cross sections in Eastern Colorado and Western Kansas. Lines of cross sections shown on accompanying key map

House Committee Makes Report on Pipe Lines; Would Regulate the Transportation of Gas

By CHARLES E. KERN
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Mar. 6.—The report on pipe lines by the House Committee on Interstate Commerce, made in compliance with House Resolution 59 agreed to in the first session of the present Congress, has been completed and the committee has had prepared a summary of the report which gives quite fully the main conclusions of the committee. The full report has not been printed. The conclusions of the report follow:

Conclusions of Committee

First. The foregoing analysis warrants the general conclusion that holding companies in the oil industry have grown in response to the same forces and conditions as apply in competitive industries generally. In regulating production or other phases of the oil industry with a view to lessening wastes, and the like the regulating authority would have to have power to reach and deal with the holding companies. The top companies, whether pure or mixed, control the operating corporations engaged in production, transportation, refining, and merchandising. To be effective, any regulation directed toward an operation or function performed by a particular corporation would have to reach the owning or controlling corporations.

Second. Oil pipe lines are found as a result of this investigation to be plant facilities in an integrated industry. They are very different from railroads in that railroads carry all manner of freight, whereas oil pipe lines are limited to one product: Petroleum carried in one direction, from a diminishing source of supply. Pipe lines have been built primarily by oil companies. It appears very difficult to apply the "commodities clause" to oil pipe lines. If the oil companies were forced to sell the pipe line companies, who would buy them and who would build to newly discovered oil fields? It appears that whatever regulation of oil pipe lines may be necessary, it may be provided in recognition of the character of pipe line transportation and its relation to the oil business.

Third. State legislatures should be encouraged to give consideration to amendments to State laws governing private property so as to apply the doctrine of "correlative rights"; and to encourage unified or co-operative drilling as a measure of conservation as well as a protection of property. Each legislature will have to decide wether or not the application of the doctrine is necessary as a conservation measure and practicable.

Fourth. The problem of conservation of oil resources is of great economic importance to the people of the United States. In the light of the facts disclosed in this report it seems that Congress might, for the present, rely upon the states to police oil fields and regulate the production of oil since states, for example, Texas and Oklahoma are enacting rather strict conservation laws. Where found necessary states by forming compacts could co-operate in conservation measures. The authority for compacts between states is provided for in the Constitution. States should make free use of the technical experience and the information of such Federal agencies as the petroleum division of the Bureau of Mines. If the states fail in their efforts at conservation, amendments to the Constitution of the United States may then become necessary to enable the Federal Government to supersede the states.

Recommendations

Recommendations: Rates for the movement of oil by pipe line interstate commerce are already under the jurisdiction of the Interstate Commerce Commission. This appears likewise to be true for storage of oil. It is recommended that the Interstate Commerce Commission give consideration to its powers under the present statutes to regulate the rates for the transportation of oil in connection with its power to require storage at a reasonable rate with a view to determining what, if any, relief is possible to the small operators who do not own transportation or storage facilities.

It is recommended that transportation of gas in interstate commerce by pipe line be regulated. In drawing a statute providing for such regulation, the Congress should consider whether or not a certificate of public convenience and necessity should be required as a condition precedent to the construction of a gas pipe line. Provision should be made for establishing a fair rate for gas delivered from a pipe line at the gate of a city, whether the gas be delivered to a municipality or to a privately owned corporation distributing to its local customers.

Excerpts From Foreword of Report

Pursuant to the authority given it, the committee authorized the chairman to appoint special counsel and the necessary staff to inquire into the control and ownership of public utilities. The chairman appointed George Huddleston and James S. Parker to serve with him as a subcommittee. Walter W. M. Splawn was selected as special counsel to have immediate charge of the investigation under the chairman and the subcommittee. Mr. Splawn had discharged a similar responsibility under Chairman Parker in making an investigation of railroad-holding companies during the Seventy-first Congress.

The inquiry under this resolution was divided into three parts: (1) Oil and gasoline pipe lines; (2) power and gas; (3) communications. The study of oil and gasoline pipe lines has been completed; that of power and gas is far advanced and a portion will soon be released; that of communications is under way.

After discussing wastes connected with the flush flow; waste from incomplete recovery and waste from unrestricted competition, the committee says:

It is possible so to apportion the components of the crude petroleum as to regulate the supply with reference to demand. If private business is left to its own devices, this adaption will automatically adjust itself on a profit basis . . . .

The question arises whether the conservation of our oil reserves is of sufficient moment to warrant Government intervention in the apportioning of products. For example, should the Government require that of the total output of petroleum the proportion allocated to the not easily replaceable gasoline should approach the maximum (60 per cent) while the percentages of the more easily replaceable components should approach the minimum. The matter, however, does not end here. There will be no conservation if the Government simply fixed the proration—rather the reverse. If the same total quantity of crude oil were taken from the reserves, such an allocation would have the effect of flooding the market with gasoline, which would then sell at a ruinously low price and be wastefully used. Moreover a great many of the smaller refineries are not equipped to utilize the more elaborate processes that such a high yield of gasoline implies. If conservation be the end in view of Government intervention, the total output as well as the allocation of components would have to be brought under control.

Full of Difficulties

The subject is full of difficulties. Government intervention is likely to be cumbersome, irritating, and not always effective. In this case, if such intervention is to be of any avail, action by the Federal Government would seem to be called for; and questions of the constitutional powers of the Federal Government would at once arise. Doubtless, however, all these difficulties might be overcome. It is a case of balancing evils. Do the exigencies of the petroleum situation warrant the efforts necessary to secure effective Government control?

It will be seen that the percentages going to gasoline, the least replaceable of the products, have steadily and rapidly increased, while the percentages going to the more replaceable products, especially kerosene, have shown a marked downward trend. It is doubtful if a more satisfactory result would follow the most vigorous and irritating regulation by Government.

It is feasible to produce gasoline from coal in the United States at prices which the public would pay at perhaps as low as the prices of ten years ago. The oil shales of the West contain large amounts of oil which can be recovered by distillation, and various processes are available for converting coal into oil, but these alternatives involve higher prices than we have been accustomed to pay.

Interstate Compacts

Compacts between the states with the most productive oil pools may be necessary. If the states will not enter such compacts, and if they persist in overestimating the amount of the annual market requirements which particular states should supply, then there is no way to control production and preserve the thousands of wells that are being pumped except by action of the Federal Government. The states can handle the problem if they will enact and enforce laws with a view to its solution. It remains to be seen how successful they will be in controlling producers within their respective jurisdictions in the interest of conservation throughout the oil-producing areas.

The consumers of oil products for the most part reside in states in which the oil pools are not located. It is to their interest that oil be produced under such conditions as will ultimately lead to recovery of as much oil as possible. If the oil-producing states fail in their efforts at conservation, then the oil-consuming states may have to act through the Federal Government to stabilize oil production and conserve oil resources.

Holding Companies

Of the top holding companies 14 are of the "pure" holding-company type and 18 of the "mixed" or combined holding and operating type. Among the subsidiaries the mixed type is the more common, 29 companies falling under this head compared with 14 companies of the pure type.

Aside from the independent pipe lines, there are three more or less distinct types of groupings. The first type is that

(Continued on Page 30)

Preliminary Program for the A. A. P. G. Annual Meeting at Houston, Tex.

HOUSTON, Tex., Mar. 4.—A comprehensive program, including papers on oil fields and conditions in all important petroleum-bearing districts of the United States as well as in some foreign countries has been drawn up tentatively for the annual national meeting of the American Association of Petroleum Geologists in Houston, March 23-25. Similarly varied and interesting programs are planned also for the annual sessions to be held concurrently by the Society of Petroleum Geophysicists and the Society of Economic Paleontologists and Mineralogists. These meetings will all be held at the Rice Hotel.

Annual elections will be held at Houston to decide successors to the following officers of the association which leads all geological societies in number of members and represents the petroleum industry in geological work: President, Frederic H. Lahee, chief geologist of the Sun Oil Co., Dallas, Tex.; vice president, Robert J. Riggs, chief geologist of the Indian Territory Illuminating Oil Co., Bartlesville, Okla.; secretary-treasurer, William B. Heroy, chief geologist of the Sinclair Exploration Co., New York; editor, Ralph D. Reed, chief geologist of The Texas Company (California), Los Angeles, Calif.

There will be several papers of particular interest to geologists and oil operators in the Gulf Coast district and other parts of Texas, as for instance the scheduled discussions of Sugarland and Raccoon Bend Fields, Texas Gulf Coast: Carolina-Texas and Laurel Fields, near Laredo; and the big East Texas Field and Kelsey Dome, Upshur County, in the eastern part of the State. Several papers of general nature on the Gulf Coast region are included.

More than 40 geological and geophysical papers are included on the general technical program of the American Association of Petroleum Geologists as announced tentatively by Dr. Donald C. Barton of Houston, chairman of the committee which is handling that program; and nearly 20 papers have been planned for the sessions of the Society of Economic Paleontologists and Mineralogists by a program committee headed by Merle C. Israelsky of Houston.

Alexander Deussen, consulting geologist of Houston and a past president of the association, is chairman of the general committee on arrangements for the convention.

The Houston Geological Society is taking the role of host. Field trip plans have been announced providing for visits to the Conroe oil field Saturday afternoon, March 25, and a trip on Sunday to Fort Bend County, to Sugarland oil field and to Boling Dome, where sulphur mining is carried out aside from oil producing operations.

Papers planned for the general technical program are as follows: A. A. Baker and C. H. Dane, "Structure of South-

(Continued on Page 30)

New Cars

New cars that are now selling won't like ordinary gasoline—it knocks

Dubbs cracked gasoline is their dish—it is anti-knock

If you have Dubbs cracking units you are sitting pretty

In this instance a seat in the grand stand costs less than a seat in the bleachers

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

Varying Properties of Mexican Crudes Reflected in Processing Methods of Refinery Operators

By EDWIN F. NELSON and GUSTAV EGLOFF
Research Laboratories, Universal Oil Products Co.

The active industrial exploitation of Mexico's rich oil deposits was not begun until the opening of the twentieth century. The Panuco River basin near Tampico was the first region to be investigated and the first well brought in was near "de la Pez" hill in May, 1901. This well produced about 1,500 bbls. daily for six years, a successful beginning for the Ebano Field. In 1902, exploration began in the Isthmus of Tehuantepec, showing producing sands at depths of 2,620 to 3,083 feet. Cougas Field, now called Furbero, in southern Vera Cruz, was opened successfully in 1907, beginning a long continued activity to the present.

The year 1908 was remarkable for the burning of the Dos Bocas well, which lasted two months and, despite attendant tragic loss, indicated the existence of great potential pools in Mexico. From that time on, formal development operations in Mexico were intensified. In 1910 the producing areas of Panuco and Topila were discovered in the Panuco River Basin, as well as the Juan Casiano and Potrero de Llano Fields in the Tuxpan region.

Series on Refining

The accompanying article is one of a series appearing exclusively in The Oil and Gas Journal explaining products and yields to be expected in refining crude oils in foreign and domestic fields.

Crudes analyzed are as follows: Santa Fe Springs, Calif., Germany, Egypt, Venezuela, Michigan, Van, Tex., Joiner, Tex., "Unrefinable crude oils." Mid-Continent, Pettus, Tex., Kentucky, West Texas, Oklahoma City, South Texas, Pennsylvania.

Exploration and consequent production in Mexico continued to increase at a rapid rate, reaching a peak in 1921 with the "Golden Lane" in Tuxpan. Some of the most important discoveries in Mexico up to that time were the Alamo in the Tuxpan region, the Cerro Azul in Tepezintla in the State of Vera Cruz, and Los Naranjos in Amatlan of the same state. From 1918 to 1921 Mexico held second place in the world petroleum production. Production figures for Mexico over the period 1901-1932 are as follows:

Year—	Barrels
1901	10,345
1905	251,250
1910	3,634,080
1915	32,910,508
1918	63,828,327
1920	163,540,000
1921	193,397,587
1922	182,278,000
1923	149,858,000
1924	144,000,000
1925	115,515,000
1926	90,700,000
1927	64,121,000
1928	50,151,000
1929	44,688,000
1930	39,520,000
1931	33,031,000
1932 (estimated)	32,000,000

Mexico's potential oil-bearing lands are believed to be 150,000,000 acres, of which about one ten-thousandth has been exploited. Some of the most promising of these possible oil lands are in the northern part of the states of Coahuila, Nuevo Leon and Tamaulipas and farther south in the Isthmus of Tehuantepec. Coahuila shows promising structures in the Comanchean rocks — Glenrose lime formation—similar to the structures yielding oil in Maverick County, Texas. Nuevo Leon and Tamaulipas are nearer to the Gulf and show younger formations. Promising structures found in the Eocene-Tertiary strata include Guerrero Dome, Roma and Ochoa structures, and the Aldamas area.

Refining

Refineries for petroleum oils in Mexico date back to 1870, when the first small refining plant was started in Furbero. Then, in 1882 some stills were installed in the Tuxpan region where oil from Cerro Viejo was refined. A refinery was built in Vera Cruz in 1886 to process crude oil imported from the United States. In 1887 the Pierce Oil Co. established its first refinery in Vera Cruz and 10 years later the same company started another plant at Tampico.

There has been a considerable decrease in the number of operating refineries in Mexico during the past few years. The combined refining capacity of Mexico is now about 340,000 bbls. per day.

The output of Mexican refineries is given by the U. S. Bureau of Foreign and Domestic Commerce[1] are given in Table 1.

Most Mexican oil is produced from the Tamasopo limestone in the lower Cretaceous, and San Felipe in the lower part of the upper Cretaceous formation. The oil is classified in two main groups, as "heavy" and "light" crude. The greater part of the "heavy" crude comes from the Panuco and Tamesi River basins in eastern San Luis Potosi, southern Tamaulipas, and northern Vera Cruz, as well as from San Jeronimo, along the shores of Tamiahua Lake and in Molino Field, to the left bank of the Tuxpan River. The lighter oil comes from San Pedro Field in San Luis Potosi, from Tamaihua Lake to south of the Tuxpan River in the Tuxpan region, from Mecatepec near Cazones River, Furbero Field in the Papantla district, the Isthmus of Tehuantepec and the fields in central Tobasco and northern Chiapas.

Heavy oils from Tamesi and Panuco Basin Fields are of two kinds. Those of the northwest sections have an average specific gravity of 0.98; while those of southeast Topila and Quiebrahacha average 0.96. Both of these oils have an asphalt base. The "light" crudes all have a paraffin base, those of Tehuantepec, Tobasco and Chiapas being especially light and rich in lubricants.

The properties and distillation characteristics of two groups of Mexican crude oils are shown in Tables 2 and 3 giving an idea of the variety of Mexican crudes, and their points of difference and similarity:

TABLE 1—PRODUCTION OF MEXICAN REFINERIES, 1930

Field and refinery—	Gasoline (bbls.)	Kerosene (bbls.)	Gas and fuel oil (bbls.)	Lubricating oils (bbls.)	Other distillates (bbls.)	Total (bbls.)	Par'fin wax (lbs.)	Asphalt (metric tons)
Tampico:								
El Aguila	1,527,162	1,006,941	4,658,393	2,705	1,360,024	8,555,225	97,902,464	216,220
Huasteca	1,581,155	651,468	4,144,921	94,935	13,964	6,486,443	.....	2,220
Pierce Oil	419,121	238,095	1,516,192	46,948	.....	2,219,356	206,336	.....
La Corona	57,314	11,769	969,975	.....	.....	1,039,058	.....	.....
Isthmus:								
El Aguila	1,306,534	789,810	4,362,718	486,116	195	7,445,373	.....	31
Total	4,891,286	2,698,083	16,152,199	629,704	1,374,183	25,745,455	98,108,800	218,471

TABLE 2—ANALYSIS OF MEXICAN CRUDE OILS
Including 100 c.c. Engler Distillation

Type crude oil—	Tuxpan	Panuco	Ochoa Sample 1	Ochoa Sample 2
A.P.I. gravity, °F.	15.0	11.8	43.5	41.4
Specific gravity, °F.	0.9659	0.9874	0.8086	0.8184
I.B.P.-E.P., °F.	182-697	212-711	256-693	334-714
Flashpoint (Cleveland open cup), °F.	....	135	....	....
Firepoint (Cleveland open cup), °F.	....	165	....	....
Flashpoint (Pensky-Martens), °F.	....	115	....	....
Furol viscosity, at 122° F. (sec.)	....	740	....	....
Cold test, °F.	....	+38	....	....
Per cent B.s. and water (benzol-centrifuge)	....	0.2	....	....
Sulphur, per cent	5.24	5.02	....	....
Per cent distilled over	Temp., °F.			
5	248	375	286	364
10	325	474	312	380
20	433	588	348	407
30	505	635	380	430
40	622	658	413	450
50	647	673	449	474
60	666	688	478	498
70	679	704	509	520
80	692	660	542	552
90	....	....	605	607
95	....	....	673	686
Endpoint	697	711	693	714
Per cent over	89.0	80.0	98.5	98.0
Per cent bottoms	....	20.0	1.5	2.0
Per cent at 400° F.	17.0	7.3	36.5	17.5
Per cent at 410° F.	18.0	7.5	39.5	21.0
Per cent at 437° F.	20.5	8.5	47.0	34.5
Per cent at 572° F.	32.0	18.5	86.0	85.0
Per cent coke by weight	11.0	....	....	....

TABLE 3—MEXICAN CRUDE OILS*

	Alamo	Cerro Azul	Chapopote Nunes	Potrero del Llano	Tierra Blanca	Toteco	Gonzalo	Topila	Zurita
Gravity, °A.P.I.	23.2	20.8	24.0	21.3	24.0	21.6	11.6	17.1	12.3
Viscosity at 100° F.	368	624	402	474	344	696	>6000	2140	>6000
Sulphur, pct.	2.95	3.61	3.20	3.61	3.08	3.79	5.29	4.55	5.09
Pour test, °F.	20	30	50	30	25	30	40	40	40
Gasoline, pct.	17.5	15.0	15.9	16.6	17.4	15.9	7.6	8.3	6.8
°A.P.I.	59.2	59.2	59.5	60.0	59.7	59.5	52.0	54.2	53.0
Distillation temp., °F.	Per cent								
Up to 122	0.9	....	....	0.5	0.5	0.2	....	....	....
122-167	1.5	1.4	1.1	1.1	1.2	1.3	....	....	....
167-212	2.1	1.6	1.4	2.3	2.5	1.6	0.6	0.6	....
212-257	2.3	2.4	2.9	2.6	2.9	2.6	1.4	1.9	1.1
257-302	3.5	3.3	3.4	3.2	3.8	3.3	1.5	2.3	1.6
302-347	3.8	2.9	3.5	3.4	3.0	3.4	2.0	1.7	1.8
347-392	3.4	3.4	3.6	3.5	3.5	3.5	2.1	2.7	2.3
392-437	3.4	3.4	3.9	3.9	3.7	3.5	2.6	3.4	2.6
437-482	4.0	4.1	4.2	3.8	4.0	4.2	3.6	3.7	3.2
482-527	5.2	5.1	5.2	5.5	5.3	5.2	7.3	5.6	4.4
Summary of products:	Per cent								
Gasoline and naphtha	17.5	15.0	15.9	16.6	17.4	15.9	7.6	8.3	6.8
Kerosene distillate	7.4	7.5	8.1	7.7	7.7	7.7	2.6	3.4	....
Gas oil	11.3	10.9	10.2	11.3	10.8	9.7	13.8	14.4	15.5
Nonvis. lub. distillate	9.0	9.7	9.2	9.3	9.0	10.8	5.0	7.0	6.3
Med. vis. lub. distillate	7.5	7.9	8.8	7.5	7.9	9.3	6.7	9.5	5.0
Residue	45.7	48.1	47.3	46.6	45.6	44.6	63.3	54.1	69.7
Distillate loss	1.6	0.9	0.5	1.0	1.6	2.0	1.0	3.3	6.7

*U. S. Bureau of Mines Tech. Paper No. 346.

Cracking Mexican Oils

The results of cracking several types of charging stock from Naranjos crude oil are worthy of note. The cracking of the crude in its entirety yielded 40 per cent of a gasoline of 67 octane number, whereas the straightrun gasoline, representing 17.8 per cent of the crude, had an octane number of only 38.

Cracking Naranjos kerosene yielded 73.8 per cent of 71 octane number gasoline.

Another cracking stock was a naphtha of 18 octane number, which yielded 83 per cent of a 69 octane cracked motor fuel or 66 per cent of a 79 octane number cracked gasoline.

Pressed oil from the same Naranjos crude was cracked to produce 58 per cent of 77 octane gasoline.

The analyses of these four charging stocks from Naranjos, Mexico, are tabulated below:

	Crude oil	Kerosene	Naphtha	Pres'd oil
Grav., °A.P.I.	20.6	40.9	49.8	26.4
Sulphur, %	3.29	0.85	0.35	2.26
Water, %	trace	....	....	trace
A.S.T.M. 100 c.c. distillation— Per cent distilled over	°F.			
Init. B.P.	158	417	320	444
10	338	439	330	538
20	466	448	337	582
30	572	456	342	622
40	618	462	346	650
50	640	470	350	675
60	647	479	354	693
70	660	489	358	713
80	620	506	366	...
90	...	534	370	...
E.P.	...	584	415	...
Coke, % by wt.	13.0	...	...	trace
% Over at 400° F.	15.0	...	...	...
% Over at 437° F.	17.0	...	...	...
% Over at 572° F.	30.0	...	...	17.5

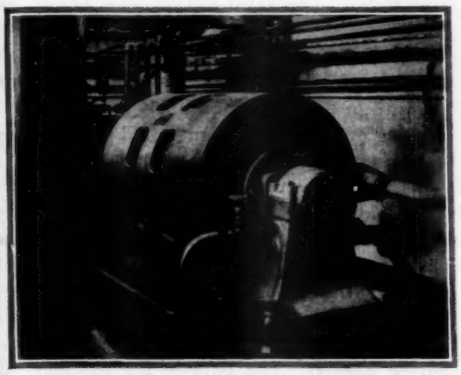
TABLE 4

Charging stock—	Crude oil	Kerosene	Naphtha	Naphtha	Pressed oil
Pressure, lbs. per square inch	200	400	500	500	400
Temperature, °F.	925	950	975	975	950
Yields of products—					
Gasoline, per cent of charge	40.0	73.8	83.1	66.3	58.0
End B.P., °F.	395	399	374	358	396
Octane number	67	71	69	79	77
Residue, per cent of charge	56.6	9.6	4.0	7.2	29.3
Gas and loss, per cent of charge	3.4	16.6	12.9	26.5	12.7
Gas, cubic feet per barrel charge	218	605	599	533	570

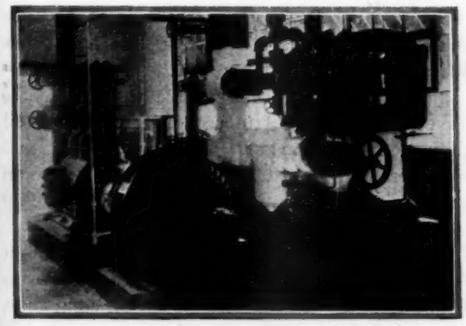
(Continued on Page 33)

[1]Trade Information Bulletin No. 784, "Petroleum Refineries in Foreign Countries," 1931, page 25.

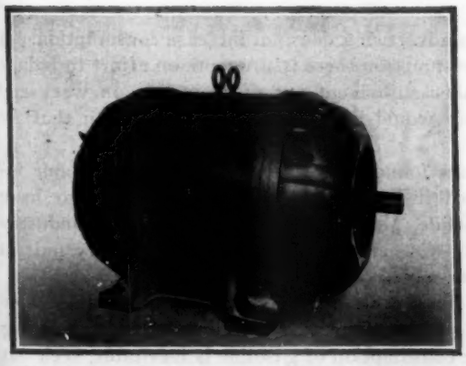
Don't let OBSOLETE *Motors pile up* Refining Costs



The new Westinghouse high-speed (3550-rpm.), high-efficiency Motor driving a modern high-speed centrifugal water pump.



A 125-hp. Westinghouse Synchronous Motor efficiently drives the carbon dioxide and ammonia compressors in a low temperature plant.



This totally-enclosed, fan-cooled, 100-hp. explosion-resisting Westinghouse Motor will drive a gasoline pump in a Canadian Refinery.

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There is a modern Westinghouse drive for every refinery application, both in hazardous and non-hazardous locations. Equipments for hazardous locations not only are explosion-proof, but also are weather-proof, permitting their use out-of-doors in line with latest refinery practice.

Westinghouse refinery motors have many unusual features that insure reliable low-cost operation.

Their bearings and windings are designed to give continuous operation on stream without shutdown.

Their high overall efficiency is reflected in lower operating costs.

And the explosion-resisting types of motors and control are approved by the Underwriters' Laboratories.

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The OIL and GAS JOURNAL

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The Next Four Months

The estimates of demand for crude oil and motor fuel during the six months ending June 30, 1933, compiled by the Volunteer Committee of the Federal Oil Conservation Board and the American Petroleum Institute Committee on Refinery Statistics, are now before the industry for guidance of its operations.

The committees, while differing on percentages, agree that the decrease in demand felt during the past year will continue and at an accelerated rate. But even if the least optimistic forecast is fulfilled the oil industry will still be outstanding as a business that has been able to retain 85 to 90 per cent of its peak market throughout the depression.

The general reliability of these estimates has been established by experience. No one doubts that if the industry could follow this chart it would attain a prosperous balance of supply with demand next July.

There is just so much crude and gasoline that can be sold within that period and any produced above that quantity will simply weaken the market.

Nevertheless, the very fact that there will be a continuing decline in demand, instead of inducing producers and refiners to reduce their output accordingly, may intensify the scramble for the smaller market. At least that has been the effect since consumption began to fall.

Sales are visualized in gallons rather than in dollars, in volume instead of profit. With less gallonage to be sold all hope to sell as much as ever and it cannot be done because the market is not there.

The sooner the industry realizes that fact and fits its operations to the demand the quicker it will get back on its feet.

These reports of the economics committees show exactly what is going on and indicate clearly what ought to be done about it. The warning is plain if it will be heeded.

The records of automotive registrations and production show what is happening to the gasoline market. The decline in registrations for 1933 is calculated about 6 per cent, and it is especially notable that this decline applies about equally to trucks and passenger cars. Since 30 per cent of our gasoline market is in the consumption by trucks and buses that decrease is significant.

At the same time there is a drive being made in legislatures all over the country to hamper the operation of trucks by regulations sponsored by the railroad companies to weaken truck competition. The automotive industries, including the affiliated oil industry, were slow to combat this danger but are now making an active fight against oppressive truck regulation.

The decline in gasoline consumption ought to stir the oil industry to redoubled efforts to check this campaign against those who consume 30 per cent of its motor fuel.

That market was brought to the oil industry without any effort of its own to develop it and the time has arrived when it should be considering means of expanding it as the most hopeful addition to consumption.

So far as passenger cars are concerned probably half the cars on the roads were purchased during the peak years of production, 1927, 1928 and 1929. It is figured that about three old cars are abandoned to each new one registered today. This ratio will increase as the cars become older.

The Federal committee estimates that if the number of cars sold this year does not exceed that of last year the cars on the road will begin dropping off at the rate of 200,000 a month.

That number of cars going out of commission would mean a drop of one per cent a month in gasoline consumption.

Nor is that all. Even with the return of better times new cars would have to be made and sold before the oil business could get any return from it. The oil business has been the last to feel the decline in demand for its products because cars continued serviceable but as they pass out of the picture with increasing speed their disappearance will be reflected in the motor fuel market.

This should be all the more reason why the warnings of the economic committees should be heeded. The gamble for gallonage is an illusion. It is not going to be there. Oil men who hope to stay in the business will do better to begin thinking of getting a profit on every gallon they sell rather than calculating how many gallons they can give away.

Some of the effort being ruinously wasted in the scramble for gasoline gallonage would return profits if spent in developing new customers for oil products. If the gas industry or the electric industry had limited their sales effort to lighting where would they be today? They did not have a ready market forced on them as the oil industry was offered the automotive market.

The oil burner has been treated almost as an interloper by the oil industry. It has grown in spite of rather than by the help of the oil industry.

The bus and truck business has been taken for granted without any encouragement from the oil business. Now that gasoline consumption is declining it might be a good investment for oil companies to aid the buses to increase their business by effective co-operation in promoting the enjoyment and convenience of travel by bus.

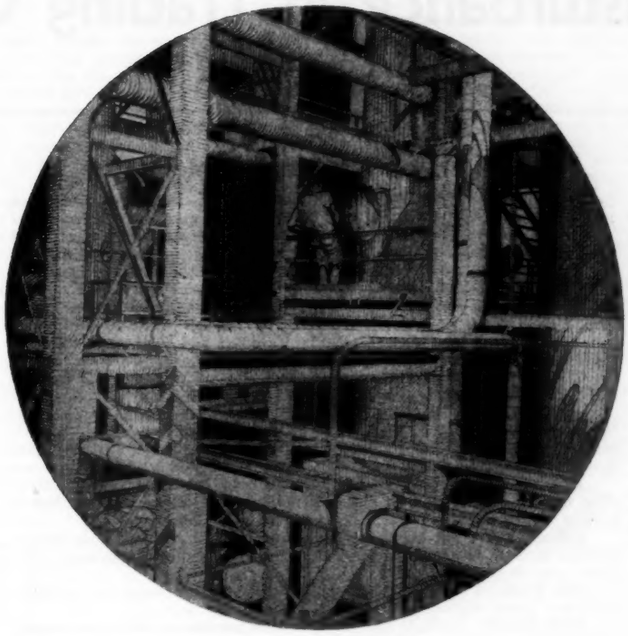
Which brings up, once more, the idea of concerted effort by the oil industry to stimulate week-end as well as holiday travel by car during the coming summer.

Merely competitive advertising does not increase consumption. It only switches what consumption there is. A common effort to induce car owners to get fuller enjoyment out of their cars on week-end trips and holiday tours would mean enlarged consumption that all would share.

Other industries have found this plan profitable. The gasoline industry has never tried it, except individual companies who have found it well worth while. Mass advertising by the whole industry could produce a nation-wide effect that would benefit every unit in the business and injure none.

That is the lesson the reports of the economics committees offer —get operations on a profit rather than a volume basis, and, seeing a temporary decline in consumption of gasoline is inevitable, seek out new markets and new uses for petroleum products.

The oil industry has never had to pioneer sale of its products since the kerosene lamp. The time has come for similar enterprise.



Old Equipment can be written off with Savings from operating new equipment

Under present conditions obsolete refinery equipment must be rebuilt or replaced if the refiner is to make a profit.

Such additions and replacements can now be erected at costs which will carry unusually low fixed charges and reserves for depreciation.

The long and varied experience of the M. W. Kellogg Company places this organization in position to accept all responsibility, from testing of crudes to initial plant operation, assuring the refiner of a completed installation that operates economically and produces products which will command the highest market prices.

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Refinery Markets in Oklahoma Continue Weak Due to Disturbance in Trading Operations

By C. O. WILLSON

The conditions in Mid-Continent refinery markets which brought a general decline in Oklahoma (Group 3) tank car markets the last few days of February continued over the past few days and were reflected in lower prices. The decline in quotations extended from all grades of refinery gasolines and natural gasolines through the kerosenes, distillates, gas oils to the lowest gravity fuel oils. Bright stocks were again reduced an additional one-fourth cent and other lubricants and wax were dull.

In a week of confusing and somewhat opposing developments many refining and marketing organizations were confronted with new problems in the solution of which they had no precedents in their operations to guide them. These new problems had to do with credit conditions so that one refiner said their sales activities had been transferred to the credit department where they would stay until such time as provisions had been made for the normal movement of products between buyers and sellers. The situation of this company is typical of other large refiners.

As explained in these columns last week, the weakness in tank car markets not only in Oklahoma but throughout the Mid-Continent and Middle West over the past two weeks has been largely due to conditions outside the oil business. As bank holidays spread the latter part of last week more and more sellers found it impossible to make satisfactory arrangements in regard to the payment for shipments many of which were in transit or had arrived at destination points. This was particularly important to a large group of small refiners who sell their entire output to jobbers throughout the Middle West and Southwest on a sight draft basis. In addition, many of the larger refiners have a part of their sales conducted on a similar basis.

The situation was not entirely new to several refiners who have had to cope with problems incidental to bank closings for several months in a territory centering in Iowa and including part of Illinois, Minnesota and other adjoining states. In these cases the refiners usually were able to make satisfactory arrangements with buyers covering payment by use of Western Union, American Express and Postal money orders. The application of these methods of payment, however, has been limited over the past week and all methods of exchange involving prompt payment for shipments were at a standstill the first of the week.

The immediate result of this condition was that many refiners were filling their storage with finished products with no immediate prospects of outlets in the consuming trade. Refiners who sell their products from week to week on the open market and who largely make spot prices were faced with a condition in which they must shortly have relief in the form of orders or shut down their plants. To secure these orders they were offering price concessions to buyers who were in a position to make prompt payments or who have strong credit ratings. Most of the latter have contract arrangements with larger refiners and are not ordinarily buyers of spot material. A group of East Texas refiners were particularly hard pressed and brokers were being offered gasoline and other products at substantial price concessions. A similar development among a group of Oklahoma City refiners who have recently increased their crude runs to stills was stopped on Saturday when the governor ordered the entire field shut in. Crude oil storage facilities of these refiners are small and the quantity of material offered to sellers began to decline as soon as the order was announced.

Higher Prices Possible

There was no consensus of opinion within the trade as to what to expect next in regard to prices. The same uncertainty existed as to the ultimate results of unprecedented conditions which have brought confusion in marketing operations in an industry which already had enough problems of its own making. In regard to prices many of the buyers and sellers apparently have come to the conclusion that continued weakness and lower prices are the inevitable results of conditions over which the oil industry has no control.

With the same set of facts there are other market students who believe that developments both inside and outside the oil industry will shortly bring a reversal in price trends with a possibility of a rapid upturn in spot quotations for all refinery products.

The prediction of higher prices is largely based on the expectation that

Refined Market Barometer

No strong points in refinery tank car markets throughout the United States were reported during the week and weakness was apparent in several refining areas. Banking conditions and the inability to carry on normal business transactions between buyers and sellers were held responsible for the lowering of prices in some areas, a few refiners being willing to make special price concessions where immediate payment was obtainable. On the strong side of the market was the expectation of new proration orders restricting production of crude oil and higher posted prices. Natural gasolines were generally slow. Kerosene, distillate, gas oil and fuel oil prices were lower where any changes became effective. Bright stocks were lowered in the Mid-Continent with a stronger demand for neutrals reported in the Gulf Coast. Some grades of paraffin wax lower in East.

Mid-Continent—Generally lower price trend in spot quotations for refinery gasolines. Natural gasolines slow. Prices on kerosene, distillate and gas oil reduced from one-eighth to one-fourth cents. All grades of fuels slow. Bright stock prices lower.

East Coast—First reduction in kerosene price in several months. Gasoline market continues weak. Fuel oil and gas oil prices steady. Higher melting point wax prices lower. More inquiries for lubricants.

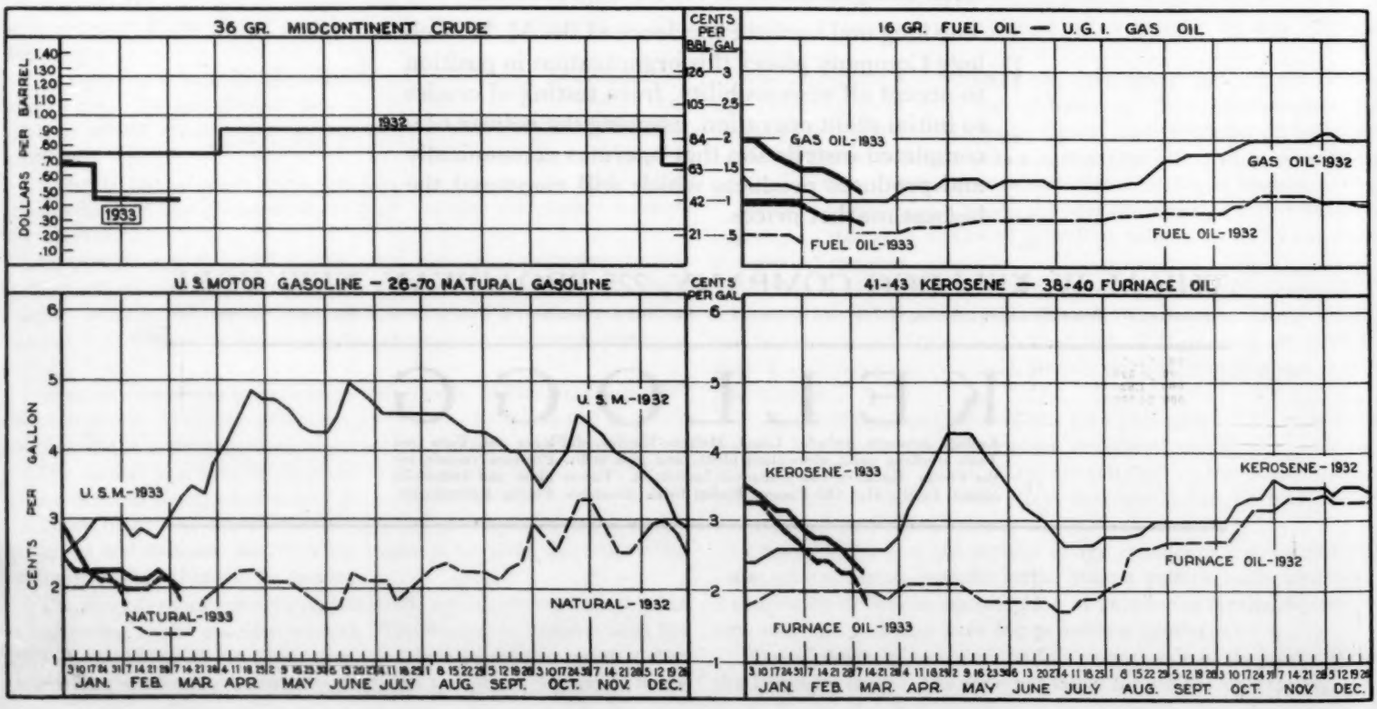
Chicago—Expected improvement in crude oil situation halts decline in gasoline market. Generally lower prices for special naphthas, kerosene, distillate, gas oil and fuel oils.

Gulf Coast—Prices generally unchanged. Strong demand for kerosene continues. More inquiries for lubricating oils.

Pennsylvania—All light end products from gasoline to distillates moving slowly. No important changes in lubricants.

California—Gasoline market weak following reductions in posted prices for crude oil. Expect price reductions in fuel oils and gas oils.

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



credit operations will in effect become more restricted and this will of necessity result in higher prices. The same development is being predicted for the general commodity markets and there is no essential difference in conditions there and those that will probably prevail in the oil marketing. Much, of course, will depend on the plans worked out covering mediums of exchange both locally and nationally over the next week. Several connected with refinery and marketing operations, who have more than a superficial knowledge of the intricacies of credit, are of opinion that considerable time will elapse before normal conditions will return in payments extending from the crude oil buyer to the consumer purchaser at filling stations. They see in this disturbance of exchange a tightening of prices despite the fact that supplies of crude oil at wells and refined products at plants would continue adequate. These predictions of higher prices are being made aside from any consideration of possible inflationary measures.

A study of this situation will show that small and large companies that have within their own organizations facilities which include the production of crude oil, refineries and bulk and wholesale stations will be in the best position to carry on operations in which new credit alignments and use of script as a medium of exchange will be necessary. In this connection some of the refinery organizations with their own marketing facilities have announced that they will continue to accept checks in payment of their products at stations and credit is also being continued to those who have been given it in the past. In the tank car end most refiners are continuing to ship to contract jobbers in line with their credit ratings. It is felt, however, that the trend will be to tighten these lines of credit rather than widen them as some have contended for the very excellent reason that the first duty of refining and marketing organizations will be to keep their own financial house in order even though this means a reduction in volume of business. It is obvious that this ultimately places the strongest concerns in a position to secure a larger share of tank car and retail business at more favorable prices.

Watch Crude Developments

In addition to bank holidays, refiners over the past week have had to give consideration to the possible effect of holiday periods in their own operations brought about by the shutting off of crude oil supplies. The closing down of the Oklahoma City Field, starting Saturday, shut off all or part of the supplies of a number of refineries within and outside the field. All of the larger refiners were in a position to continue normal operations by pulling on storage. As the new week started there were rumors that similar action might be taken in the East Texas Field and if it materializes the two largest sources of supply of flush production in the Mid-Continent area would be shut off temporarily.

At this writing one guess is as good as another as to what will happen in the crude oil situation over the next month. One large buyer has issued a statement in which promise of higher posted prices for crude oil is made provided the surplus production is eliminated as a market factor through enforcement of proration agreements. This position is said to have the support of several other major buyers. It is claimed that the condition is to be met by new proration laws in both Texas and Oklahoma which will enable the states to reduce production to current requirements with the elimination of "hot" oil which has nullified similar efforts in the past. The restriction of supplies even temporarily will of course have some influence on refinery markets and should an effective proration plan be worked out in the immediate future the development would tend to stiffen prices on gasoline especially if the higher prices for crude oil are supported by a large purchase of gasoline. Until something more definite materializes, most buyers and sellers will give their attention to market factors which are of more immediate importance.

Prices

Considerable difficulty was experienced on Tuesday in arriving at tank car prices in Oklahoma and other Mid-Continent refining areas which could be said to be representative of market conditions. Open market transactions in the usual sense of the word did not exist. As previously explained there were a few refiners anxious to move material who were willing to give any concessions asked by the buyers provided the latter were in a position to make prompt payment. Some of these refiners have payments on crude oil to meet and the continuance of their operations were dependent on their ability to secure cash or its equivalent to satisfy the producers of the crude oil.

The quotations of these sellers were not considered representative of actual market conditions and are not reflected in the prices quoted in the market pages of this issue. It is conceded that the published prices are largely nominal due to the dearth of spot business.

The low of the third grade U. S. Motor was dropped from 2⅛ to 2 cents with corresponding decreases in all other grades of refinery gasoline. A price of 2 cents continued for 26-70 natural gasoline in Oklahoma although there was very little new trading at any price. In Texas the low for the same grade was 1⅞ cents. Other grades of natural gasoline were lower in price and inactive. This market will need some additional buying before the end of the week if present prices are to be maintained.

The 41-43 water white kerosene price has been dropped to a low of 2¼ cents in Oklahoma with cheaper material available from Texas refiners. The weakness in kerosene spread to include all grades of distillate which are quoted over a price range of 1⅝ to 2½ cents. Prime white and straw color material was freely offered by sellers at 1¾ to 2 cents.

Industrial gas oils have dropped to a low of 1⅛ cents and all grades of fuel oils are 5 cents per barrel lower.

Federal Trade Commission Makes Report on Marketing Conditions in Detroit

The Federal Trade Commission last week made an official report of its investigation regarding retail marketing conditions in Detroit where prices have been below normal for over two years. The report also revealed that the commission at this time is making a general investigation into the legality of the lease and agency agreement which have been a much discussed marketing practice in the oil industry. A report on this practice is to be made later.

In its report on conditions in Detroit the commission states that as a result of the cut prices a zoning plan was attempted by the major oil companies in an effort to confine the low prices to the zone in which a large independent jobbing company was exclusively operating. Independent dealers outside of this zone complained of this practice.

The commission's investigation disclosed no tangible evidence of collusion on the part of the oil companies in establishing price zones and none indicating that the price differentials complained of were not made in good faith to meet competition. The zoning effort the commission found was unsuccessful as the tendency was for motorists to buy in the zone in which the importing company operated at the lowest price.

The investigation centered around conditions brought about largely by the Sunny Service Oil Co. which in 1931 started buying gasoline from foreign sources of supply. Regarding the operations of the Sunny Service company the report said in part:

"Early in its career, the Sunny Service Oil Co. began to undersell its competitors in the filling station trade, and for this reason, it alleges, the major oil companies tried to interfere with its domestic source of supply. During the latter part of 1931, in order the better to maintain its position in the market, this company began to import foreign gasoline, blending with its domestic casinghead stock, in order to bring it up to "N" point. It maintains that it has never imported any Russian gasoline, and there is nothing in the record to indicate the contrary. During 1931, this company imported about 7,000,000 gallons of Rumanian gasoline and in 1932 something in excess of 23,000,000 gallons. During this period, it had constructed storage facilities at Detroit for some 7,500,000 gallons of gasoline. All purchases seem to have been made from the Steaua Romano Petroleum Co. (Steaua Romano Societe Anonyme pour l'Industrie de Petrole), Bucharest, Rumania, in which the Rumanian government is said to have a controlling interest.

"The information obtained by the commission as to the price paid by the company for Rumanian gasoline during 1931 and 1932 was that the price f.o.b. Constanza was 2.78 cents per gallon. The cost of transportation, brokerage, storage, etc., brought the delivered price up to about 5 cents more or less, the importer deriving an advantage, on account of the rate of exchange, from payments in English sterling.

"With the importation of Rumanian gasoline by this company, the price war in Detroit took on greater proportions. The company increased its number of filling stations, began the use of large advertisements in the newspapers, and addressed the public by radio. Other concerns met the competition."

American Petroleum Institute Weekly Refinery Statistics

Figures below reported for week by American Petroleum Institute. (1) Per cent refinery capacity represented. (2) Daily average crude runs to stills. (3) Total motor fuel stocks. (4) Gas oil and fuel oil stocks. All figures in 42-gallon barrels.

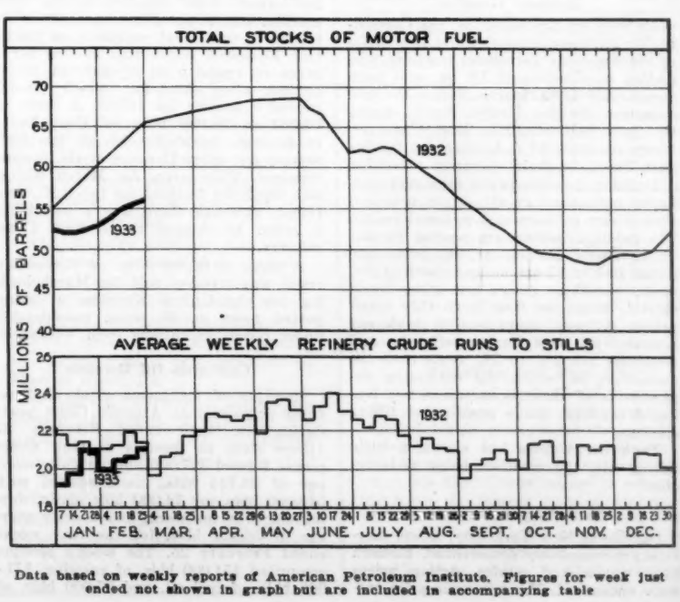
Week Ending March 4, 1933, Compared to Week Ago

	Week Ending March 4, 1933				Week ending February 25, 1933			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	99.1	435,000	15,409,000	6,580,000	99.1	453,000	14,689,000	6,879,000
Appalachian	95.0	81,000	1,774,000	880,000	95.0	78,000	1,979,000	917,000
Ind., Ill., Ky.	97.5	270,000	8,036,000	3,235,000	97.5	316,000	8,137,000	3,264,000
Okla., Kans., Mo.	84.9	201,000	5,173,000	2,388,000	84.9	203,000	5,043,000	2,851,000
Inland Texas	56.4	86,000	1,303,000	2,116,000	56.4	93,000	1,620,000	2,130,000
Tex. Gulf	97.7	406,000	6,356,000	6,427,000	97.7	407,000	6,269,000	6,331,000
La. Gulf	97 3	93,000	1,633,000	2,160,000	97.3	106,000	1,607,000	2,166,000
N. La. and Ark.	88.5	50,000	313,000	650,000	88.5	50,000	322,000	648,000
Rocky Mtn.	90.5	23,000	1,520,000	602,000	90.5	30,000	1,460,000	580,000
California	94.6	369,000	14,808,000	98,473,000	94.6	384,000	15,103,000	98,999,000
Total U. S.	91 6	2,024,000	56,325,000	124,012,000	91.6	2,120,000	56,230,000	124,765,000

Total motor fuel stocks Bureau of Mines basis 57,420,000 bbls.

Week Ending March 4, 1933, Compared to Year Ago

	Week Ending March 4, 1933				Week ending March 5, 1932			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	99.1	435,000	15,409,000	6,580,000	100.0	422,300	6,619,000	6,500,000
Appalachian	95.0	81,000	1,774,000	880,000	91.8	87,300	1,772,000	1,181,000
Ind., Ill., Ky.	97.5	270,000	8,036,000	3,235,000	98.9	257,600	5,759,000	4,669,000
Okla., Kans., Mo.	84.9	201,000	5,173,000	2,388,000	89.6	192,700	3,793,000	3,201,000
Inland Texas	56.4	86,000	1,303,000	2,716,000	....	81,000	1,799,000	2,704,000
Tex. Gulf	97.7	406,000	6,356,000	6,427,000	99.8	333,600	7,179,000	7,191,000
La. Gulf	97.3	93,000	1,633,000	2,160,000	100.0	99,000	1,493,000	3,327,000
N. La. and Ark.	88.5	50,000	313,000	650,000	....	45,700	134,000	684,000
Rocky Mtn.	90.5	23,000	1,520,000	602,000	94.0	29,300	1,966,000	676,000
California	94 6	369,000	14,808,000	98,473,000	97.1	419,800	14,910,000	96,042,000
Total U. S.	91.6	2,024,000	56,325,000	124,012,000	95.2	1,968,300	45,429,000	126,175,000



Data based on weekly reports of American Petroleum Institute. Figures for week just ended not shown in graph but are included in accompanying table

East Coast Refiners Reduce Tank Car Kerosene; Gasoline Price War Remains Unchecked

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, Mar. 6.—A reduction in posted prices for kerosene at the refinery featured the East Coast market during the past week. The decline, the first downward readjustment in kerosene prices for some months, marked a definite weakening in the market for this oil, which has been exceptionally active during recent months.

Interest continued to center in the gasoline price war which has been raging in the metropolitan New York area for some weeks. Until recently, price cutting at retail stations has been confined to third grades, which have been variously selling from 10 to 12 gallons for $1, including the tax of 4 cents, according to the intensity of competition. Colonial Oil Co. at the start of the week posted signs announcing first grade gasoline at 10 gallons for $1, including state and Federal taxes. Other refiners have followed, and first grade products are now selling at a price which figures out 6 cents gross at the station, and shows the refiners a netback of not to exceed 2 cents at the refinery. Third grades are thus pushed into the background, but not in the manner contemplated a few months ago when a move was started to eliminate third grade marketing in this territory.

Some believe the current marketing of first grades at existing low prices is the last step in the war, to be followed by a general return to normal pricing, but there is nothing concrete to support this view.

So far as can be learned, the price cutting in this area has not developed any new consumption.

Present unsettled conditions in crude and products markets have independent operators in the East in a quandary, and there is a definite tendency to defer commitments.

Refinery Gasoline

In view of the report by the Committee on Refinery Statistics and Economics of the American Petroleum Institute, predicting a reduction of 7.6 per cent from comparable 1932 figures in gasoline consumption for the United States during the first half of 1933, East Coast refiners are reported to be planning further curtailment in their operating schedules.

Refinery gasoline prices remained nominally unchanged at all of the principal East Coast refinery and terminal points. The principal sellers are posting regular U. S. Motor gasoline at 5¼ cents and motor fuel of 65 octane and above at 5¾ cents, but these prices are being freely shaded. Based on New York City retail prices, refinery quotations in tank car lots at New York Harbor refineries and terminals are 2¼ to 2¾ cents over the quotations at which the marketing departments of these same sellers are laying down first grade gasoline at filling stations.

Tank car volume has shown a little falling off, the weather being unfavorable.

Tank Wagon Gasoline

Outside of New York City, where markets are completely demoralized, Eastern tank wagon and service station prices were unchanged. There is some price cutting reported at various points, but nothing to compare with the situation here, where motor fuel is being virtually given away by marketers.

Demand for premium gasoline has shown sporadic spurts during recent cold spells, but current gallonage, in the aggregate, is reported to be running below that at this time last year, when a sharp contraction in consumption of the ethylized product was witnessed. Marketers continue to maintain the usual spread of 3 cents. Registrations of new cars are on the increase in Eastern territory and as many of these new models require an ethylized motor fuel, or are at least recommended for use with this grade of fuel, some recovery in consumption is anticipated.

Kerosene

Effective March 1, Standard Oil Co. of New Jersey and other major companies reduced kerosene tank car prices one-quarter cent, bringing the market for 41-43 water white down to 5¼ cents at refineries. This is the figure at which most of the spot business has been done in recent weeks. Demand was fairly well maintained.

Tank wagon kerosene markets were again without quotable change. Marketers reported that colder weather had stimulated demand to some extent, and volume was greater. Gallonage is reported exceptionally heavy in many rural districts, where distillate burners appear to have been generally adopted in coal ranges for cooking and heating purposes.

Fuel Oil

Bunker "C" oil continues posted at 75 cents, bulk, although the concessions which have been in vogue for some time to contract buyers in the steamship trade are being continued.

While the market position is less strong, so-called "hot" fuel oil is a rarity in this market, and major refiners and marketers are continuing to adhere to the posted schedule.

Consumers in the shipping field are drawing stocks on contract in substantial volume, and reports in marine circles indicate some slight improvement is in sight.

Eastern refiners were greatly interested in reports from London indicating that large consumers of Diesel oil in England and on the Continent, notably in Germany, are seeking to have Diesel oil classified in some manner comparable to the octane number method of rating gasoline.

There was no change in the position of the Diesel oil market. Refiners continue to post $1.65 in bulk at terminals, or $1.71½ f.a.s. within harbor limits at the principal North Atlantic ports. Business was reported quiet.

For shore delivery, refiners continue to post 4 cents for 26-30 oil in tank car lots, f.o.b. refineries or terminals.

Gas Oil

A better tone was apparent in the gas oil market, and refiners were again adhering to the posted basis of 4 cents, weak offerings at 3¾ cents apparently being cleared up. Most of the week's business consisted of shipments against standing contracts.

Furnace Oil

Refiners reported a continued good demand for domestic heating oil for tank car shipment, and the market remained fairly steady at 5 cents for 36-40 oil, 4 cents for 32-32 gravity oil, and 3½ cents for 21 gravity industrial oil.

In the tank wagon division a steady price undertone was in evidence on the domestic grades, although on the heavier oils some uncertainty continued.

Paraffin Wax

Sellers were quoting the market fractionally lower on several grades, and this renewed easiness tended to slow down demand somewhat. Spot 130-132 a.m.p. was available at 3 cents per pound, one-eighth cent under previous quotations, with 133-135 a.m.p. and 135-137 a.m.p. showing corresponding reductions at 3⅞ to 4⅛ cents per pound, respectively. Foreign buyers were again pressing for concessions, and no trading basis had been established.

Petrolatum

The petrolatum market softened somewhat. Amber was offering at 2 cents per pound, with extra amber at 2⅜ cents, lily white at 5⅜ cents, snow white at 6⅜ cents, and cream at 4½ cents per pound, reductions of one-eighth cent in each instance.

Domestic demand showed a little improvement at the lowered price levels, and sellers were looking for a substantial volume of contract business during the second quarter.

Lubs

The lower price levels established on a number of grades during the previous week brought out a greater inquiry, and export sellers reported sales were substantially better.

Exports and Imports of Refined Products, Receipts of California Oils in the East

NEW YORK, Mar. 6.—Gulf sellers increased their quotations on export gasoline, and buyers have withdrawn from the market, temporarily at least, to test the stability of the market at its higher level. U. S. Motor is quoted at 3⅜ to 3½ cents, with 64-66 375 endpoint at 3⅞ to 4 cents, and intermediate grades at 3¾ cents. There were no gasoline cargo fixtures reported out of the Gulf, and the same was true of kerosene, which was unchanged. A cargo of gasoline was reported fixed at Philadelphia for shipment to Rio de Janeiro and/or Santos, but this was believed to represent a shipment by a Philadelphia refinery to its distributing organization in Brazil.

An unusual development in the Gulf market last week was an inquiry for U. S. Motor gasoline for shipment to California, but the buyer was looking for material at 2½ cents, so nothing is expected to develop in this connection.

A number of inquiries for crude oil for export were reported in the Gulf market, but these were regarded as intended to sound out suppliers on prices. One European buyer was looking for a cargo of crude with a specified Diesel content after skimming, which inquiry proved a puzzler for sellers. A cargo of 50,000 to 55,000 bbls. of East Texas crude was reported sold at the Gulf netting the seller 71 cents at the loading terminal. This cargo, for March lifting, was reputedly destined for the U.K./Continent, although there was a possibility it might be shipped to an East Coast refinery.

A cargo of 65,000 bbls. of Venezuelan crude was reported sold for March loading for the United Kingdom at a reported price of 49 cents, considerably under recent quotations from Venezuela.

California Oil Receipts

Receipts of California crude and refined petroleum at Atlantic Coast ports during the week ended February 25 (there were no receipts at Gulf Coast ports) totaled 397,000 bbls., a daily average of 56,714 bbls., as compared with 518,000 bbls., or 74,000 bbls. daily, during the previous week, and a daily average of 56,821 bbls. for the four weeks ended February 25. The week's receipts comprised 151,000 bbls. of gasoline, 171,000 bbls. of fuel oil, and 75,000 bbls. of gas oil, the cargoes being received at the following ports: Baltimore, 75,000 bbls.; New York, 171,000 bbls.; Philadelphia, 72,000 bbls.; other East Coast ports, 79,000 bbls.

At the close of the week, one cargo was reported afloat from California for this territory, 80,000 bbls. of gasoline on the Standard shipping tanker Elisha Walker for Fall River.

Petroleum Exports

The following table shows exports of principal refined petroleum products reported from the port of New York during the three weeks ended February 25 (all figures in gallons unless otherwise noted):

	Week ended		
	Feb. 25	Feb. 18	Feb. 11
Gasoline	129,000	160,000	205,000
Naphtha	505,000	550,000	525,000
Kerosene	9,000	15,000	5,000
Fuel and gas oil	30,000	14,000	52,000
Lub. oil	416,000	501,000	998,000
Pet., refined	430,000	375,000	318,000
	Pounds		
Petrolatum	5,000		2,000
Paraffin wax	2,180,000	1,795,000	7,475,000
Refined	115,000	70,000	25,000
Scale	160,000	600,000	60,000
Lub. grease	600,000	545,000	1,445,000

Sellers report here that European demand is beginning to "open up" on somewhat broader lines, and a more active export market is looked for, particularly on lubricating oils.

Imports

Imports of crude and refined petroleum at the principal United States ports for the week ended February 25 totaled 824,000 bbls., a daily average of 117,714 bbls., compared with 1,042,000 bbls., a daily average of 148,857 bbls. for the previous week, and a daily average of 139,393 bbls. for the four weeks ended February 25. Details follow:

(Barrels of 42 gallons)

At Atlantic Coast ports—	
Baltimore	67,000
New York	573,000
Philadelphia	108,000
Others	76,000
Total	824,000
Daily average	117,714

There were no imports at Gulf ports during the week.

The week's imports comprised 462,000 bbls. of crude petroleum and 362,000 bbls. of fuel oil.

DEATH OF DAVID J. HALE

David J. Hale, veteran drilling contractor, died in Bradford, Pa., Friday, February 24.

Change in Crude Oil Situation Halts Rapid Drop in Gasoline Quotations; Fuel Oils Lower

By R. C. CONINE
Chicago Bureau, The Oil and Gas Journal

CHICAGO, Mar. 6.—Distributors and jobbers of petroleum products in the Chicago district are getting returns on their policy of conservative credit dealing initiated last year. Their liquid position, they report, gives them a free hand in current operations. One of the larger independent jobbers in the district cut off every credit account on his books in the last quarter of 1932. His business was largely with farmers and the immediate effect was that his gallonage shrunk to a small fraction of what it had been. Most of his customers made connections with some of the larger marketers who have a particular craving for volume. The jobber's business gradually built up under the cash policy, and his business ranges between two and three cars of gasoline a week (it had been five cars) and taking a profit of 3.5 cents a gallon real money he is able for the first time in his experience to "lay the money on the barrelhead" when he orders material.

It is indicated that most of the major and semimajor oil companies will continue to conduct their business along the usual lines in spite of the spread of banking holidays. However, the smaller marketing units are demanding money orders or sight drafts before releasing material. This is not a new policy for the majority and the business of independents has therefore undergone no particular shock. It is expected that business at the service stations will be affected by conditions. The usual March weather, in which a snow flurry may interrupt a bright day, is only slightly more favorable for motoring and is definitely unfavorable to heating oil demand. In the Ohio territory expanding seasonal consumption was given as the reason for an advance of 1 cent in the service station and tank wagon postings, March 2.

Withhold Planned Price Cuts

At the close of business last week a number of refiners were preparing to cut their gasoline tank car markets to a point one-half of a cent under prices quoted at the beginning of the week, or a quarter of a cent under today's ruling markets. During the week tank car gasoline prices dropped a quarter of a cent in representative offerings, with a few quotations still lower. At least one source for resellers made no price distinction between U. S. Motor under 57 octane, and middle octane U. S. Motor. The 65 octane material was offered at three-eighths of a cent higher. Several refiners were inclined to make similar offerings, but with the turn in events Saturday in the East Texas and Oklahoma City oil fields, the refiners in question decided on a policy of holding their prices to the lows of published quotations and refusing to sell over any period. Without, it seems, proper justification, the price at which the Chicago post office obtains its quarterly requirements of gasoline is often taken as an indication of what the oil companies expect in the markets in the forthcoming three months. Actual surveys in the past have shown that there is practically no foundation for this attitude. The wide differences among the bidders indicates the weakness of the post office transaction as a business gauge.

The following prices were quoted for the April 1, to June 30, business of the Chicago post office (225,000 gallons): Tank car propositions, Seneca, 0.125 cent below the average tank car price with maximum of 2.875 cents and handling charge of 0.35 cent; Deep Rock, 0.125 cent below the average tank car market with 3.875 maximum and 0.35 cent for handling. Bidders' bulk plant basis: Deep Rock, 0.125 cent under average tank car market with maximum of 4 cents and 2.75 cents handling charge; Standard of Indiana, 0.125 cent under the average tank car market, with maximum at 2.12 cents and handling charge of 2.44 cents; Jewett & Sowers, 0.125 cent under the average tank car market with 2.5 cents maximum and 3.33 cents handling charge; Shell, minimum tank car market with 4.625 cents maximum and 1.87162 cents handling charge, and Wells Petroleum Co., 0.25 cent under the low of the tank car market with 5 cents maximum and 2.44 cents handling charge.

Chicago Gasoline Consumption

Gasoline consumption in the Chicago district in 1932, declined 8.2 per cent from the preceding year's mark of 442,540,434 gallons, according to gasoline inspection figures just released for the city of Chicago. Consumption in the city in 1932 amounted to 407,037,528 gallons. That a further reduction in consumption may be anticipated for the first half of 1933, is indicated in the forecast released by the committee on refinery statistics and economics of the American Petroleum Institute. The committee estimates that decline for the first half of this year will amount to 22,000,000 bbls., or 7.6 per cent. A recommendation is made that motor fuel stocks on June 30, be at a level 10,000,000 bbls. below the stocks of 1932 at the same period by holding crude runs to stills to 2,090,000 bbls. daily.

Markets Break, Then Hold

The gasoline tank car markets Monday showed no definite trend, but oil men appeared to be breathing a little more easily and were showing more hopefulness. Today's price quotations show a decline of a quarter of a cent in the ruling markets for most grades of gasoline, as follows: U. S. Motor, third grade, 2 to 2¼ cents; U. S. Motor, regular, 2¼ to 2½ cents; U. S. Motor, premium grade, 2½ to 2¾ cents. At least one Texas refiner is quoting in sixteenths of a cent, making a price of 2⅛ cents on 60 octane gasoline, and 2½ cents on 65 octane gasoline. The East Texas refiners are quoting the low of published prices, generally, to Chicago district buyers.

The 60-62 400 endpoint gasoline is offered at 2⅛ to 2¼ cents; the 64-66 375 endpoint material and the 68-70 360 endpoint gasolines are negligible quantities at this time due to competition of stabilized natural gasolines. The 375 gasoline is quoted at 2⅝ to 2¾ cents, and the 360 gasoline at 2⅞ to 3 cents, representing declines of an eighth of a cent. The aviation fighting grade gasoline is down a quarter to a cent to 3⅛ to 3⅜ cents.

Special Naphthas Lower

With a few exceptions, special naphthas are lower, and the principal marketers report that they are losing business by slight price margins. One marketer said that he was certain that some of his customers where showing prices to competitors and thus were obtaining lower quotations. This marketer lost one deal when a competitor quoted a price of 0.016 cent under his quotation. This standard of business ethics is not helping matters, and whether the marketers will decide to hold their material rather than enter into price quibbles, or slash prices in a burst of competitive ardor, remains to be seen.

The special naphtha markets Monday were as follows: Cleaners, 5 to 5¼ cents, a drop of a quarter cent on the high; lacquer diluent, 180-250, 6½ to 7 cents, a decline of half a cent; lacquer diluent, 140-200, 7½ to 8 cents, the cuts ranging from a full cent to half a cent; rubber solvent, 5 to 5¼ cents, a decline of half a cent; Stoddard solvent, 4¾ to 5 cents, a decline of a quarter cent; petroleum thinner, 4 to 4¼ cents, a reduction of a quarter cent; V.M.&P. naphtha, 5 to 5¼ cents, a reduction of an eighth cent; petroleum spirits, 3¾ to 4 cents, a reduction of a quarter cent. Blending naphtha, 50-52 gravity and 437 endpoint, moved down in sympathy with the gasoline markets to a range of 2 to 2¼ cents.

Kerosene Markets

The kerosene tank car markets have not suffered to the extent of the gasoline, distillate and fuel oil markets. The season for maximum kerosene consumption is approaching and jobbers are willing to take material for storage. As with gasoline storage, the jobbers are less inclined to hold off taking material until after April 1, when personal property tax assessments are scheduled, because leniency is looked for in the matter of taxes. Tax dates and deadlines for payment of license fees have been extended and the prospect for further extensions appears certain. Several refiners who have been supplying kerosene to the trade report that they are out of material. The 41-43 water white kerosene Monday was quoted at 2⅝ to 2⅝ cents to the trade. The lowest price heard on this material for resale was 2¼ cents. The 42-44 water white kerosene was offered at 2½ cents to 2¾ cents to the trade with the lowest price for resale of 2⅝ cents.

Distillates and Fuel Oils

Distillates and fuel oils have been faring badly. Some of the 38-40 straw distillates which precipitated the break in price is now in coastwise movement to the East. Reports from the field state that one East Texas refiner is scheduled to move the largest part of his output into the East up to June. Resale prices on prime white and straw 38-40 distillate have been quoted as low as 1¾ to 1⅞ cents, while the 32-36 zero mate-

(Continued on Page 33)

Do You Remember?

From The Oil and Gas Journal Files

25 Years Ago

March 19, 1908

England's 34-knot oil-burning torpedo boat destroyers, fastest war craft in the world, are called to the attention of the U. S. Navy, which, with the largest and cheapest oil supply in the world, lags behind a country with only a remote supply of the fuel.

The Texas Supreme Court upholds the lower courts in both the main ouster and penalty suit and the receivership case of the Waters-Pierce Oil Co.

The Texas Company has moved its general offices from Corsicana to Houston. President J. S. Cullinan and General Attorney Autry have been making Houston headquarters for some time. T. J. Donoghue, assistant to the president; W. T. Cushing, general superintendent; and C. P. Dodge, sales agent, are moving to Houston. The general offices will employ 200 men.

20 Years Ago

March 20, 1913

Attorney General Looney of Texas files ouster suit against the Standard Oil Co. of New York, Magnolia Petroleum Co., Standard Oil Co. of New Jersey and several smaller companies.

Prairie Oil & Gas Co. pays $1,000,000 for Cushing Field holdings of Hi-Grade Oil Co. including 2,000 bbls. production, 4,000 acres of leases and 3 gas wells with a capacity of 70,000,000 feet per day. C. J. Wrightsman, E. Wrightsman, B. B. and E. L. Jones and T. B. Slick are the owners of Hi-Grade Oil Co.

T. N. Barnsdall, of Pittsburgh, noted oil and gas producer, is in Tulsa on business.

C. D. Martin, president of the Roxana Petroleum Co., resigns to take charge of the business of the Waters-Pierce Oil Co. in the Mid-Continent Field.

10 Years Ago

March 15, 1923

Having found the second sand in Teapot Dome, Wyoming, a disappointment, Mammoth Oil Co. will drill two wells to the Lakota sand. Salt Creek Field is producing 86,900 bbls. per day.

Sinclair Pipe Line Co. will spend $50,000,000 for pipe line construction and equipment this year; Sinclair Crude Oil Purchasing Co. has purchased one hundred fifteen 80,000-bbl. tanks and Sinclair Refining Co. is building a new refinery at Marcus Hook, Pa.

William A. Earseman, former associate of James M. Guffey, Andrew W. Mellon, J. J. Vandegrift and other notable oil pioneers, died in Pittsburgh.

Colonel R. Wilson, general superintendent of the producing department of The Texas Company, died in Tulsa.

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

EXCLUSIVE OF TAXES

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils, which became effective June 21, 1932.

Refinery Gasolines

OKLAHOMA (Group 3)—	Mar. 7		Feb. 28	
*U. S. Motor grades:				
Regular	.02¼	.02½	.02⅜	.02⅝
Premium	.02½	.02⅝	.02⅝	.02⅞
Third grade	.02	.02¼	.02⅛	.02⅜
60-62 400 grades:				
Regular	.02⅜		.02¼	
Premium	.02⅝	.02¾	.02¾	.02⅞
Third grade	.02⅛	.02¼	.02¼	
64-66 390	.02¼	.02½	.02⅝	.02⅝
64-66 375	.02½	.02⅝	.02⅝	.02⅞
68-70 350	.02¾	.03	.02⅞	.03
NORTH TEXAS—				
U. S. Motor grades:				
Regular	.02¼	.02½	.02⅜	.02½
Premium	.02½	.02¾	.02⅝	.02¾
Third grade	.02	.02¼	.02⅛	.02¼
60-62 400	.02⅛	.02¼	.02¼	.02½
64-66 390	.02¼	.02½	.02⅝	.02½
64-66 375	.02½	.02⅝	.02⅝	.02⅞
64-66 360	.02¾	.03	.02⅞	.03⅛
†NORTH LOUISIANA—				
U. S. Motor grades:				
Regular	.02½	.02¾	.02¾	.03
Premium	.02¾	.03	.03	.03¼
Third grade	.02¼		.02⅜	
60-62 400	.02⅜	.02½	.02½	.02¾
†ARKANSAS—				
U. S. Motor grades:				
Regular	.02½		.02¾	.03
Premium	.02⅝		.03	.03¼
Third grade	.02¼		.02⅜	.02½
CHICAGO (Based on Oklahoma Group 3)—				
U. S. Motor grades:				
Regular	.02¼	.02½	.02½	.02¾
Premium	.02½	.02¾	.02¾	.03
Third grade	.02	.02¼	.02¼	.02⅜
60-62 400	.02⅛	.02¼	.02⅜	.02⅝
64-66 375	.02⅜	.02⅝	.02¾	.02⅞
68-70 360	.02¾	.03	.03	.03⅛
Aviation fighting grade	.03⅛	.03⅜	.03⅜	.03⅝

*Octane Ratings—The following octane ratings apply to the three grades of U. S. Motor gasoline: Regular, 57-65 octane number; premium, above 65 octane number; third grade, below 57 octane number.

†For Arkansas, Louisiana and Mississippi delivery.

PENNSYLVANIA (inland refineries)—				
U. S. Motor	.04½	.04¾	.04⅝	.04¾
60-62 400	.04⅝	.04¾	.04¾	.05
64-66 375	.05	.05¼	.05	.05¼
68-70 350	.05¼	.05½	.05¼	.05½
CALIFORNIA (domestic movement only)—				
54-58 U. S. Motor	.04	.05	.04½	.05½
58-60 400	.04¾	.05¾	.05	.06
EAST COAST—				
U. S. Motor, below 65 octane:				
New York (Bayonne)	.05½		.05½	
Boston	.05½		.05½	
Baltimore, Md.	.05½		.05½	
Charleston, S. C.	.05½		.05½	
U. S. Motor, 65 octane and above:				
New York (Bayonne)	.05¾		.05¾	
Boston	.05¾		.05¾	
Baltimore, Md.	.05¾		.05¾	
Charleston, S. C.	.05¾		.05¾	
GULF COAST (domestic)—				
U. S. Motor, 65 octane and above	.03¾	.04	.03¾	.04
U. S. Motor, below 65 octane number	.03	.03¼	.03	.03¼

Naphthas

OKLAHOMA (Group 3)—	Mar. 7		Feb. 28	
50-52 450 (blending)	.02	.02⅛	.02	.02¼
PENNSYLVANIA (inland refineries)—				
50-54 430-450 (blending)	.04¼	.04⅜	.04⅜	.04⅝
ARKANSAS—				
48-50 450 (blending)	.02¼	.02½	.02½	.02¾
CHICAGO (Based on Oklahoma Group 3)—				
50-52 450 (blending)	.02	.02¼	.02¼	.02⅜
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-320 e.p.	.05	.05¼	.05	.05½
Lacquer diluent, 180 i.b.p.-250 e.p.	.06½	.07	.07	.07½
Lacquer diluent, 140 i.b.p.-200 e.p.	.07½	.08	.08½	
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.05	.05¼	.05	.05½
Stoddard solvent, 300 i.b.p.-410 e.p., over 100° flash	.04¾	.05	.05	.05¼
Pet. thinner, 290, 300 i.b.p.-415 e.p., over 83° flash	.04	.04¼	.04¼	.04½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.05	.05¼	.05⅛	.05⅜
Petroleum spirits	.03¾	.04	.04	.04¼

Natural Gasolines

OKLAHOMA (Group 3)—	Mar. 7		Feb. 28	
Grade 18-55	.02⅜	.02½	.02⅝	
Grade 26-70	.02		.02⅛	
Grade 30-70	.01¾		.02	
*Low pressure grades:				
15 lb. v.p. (max.)	.02½		.02¾	
11 lb. v.p. (max.)	.02⅝	.02¾	.02⅞	.03
NORTH TEXAS—				
Grade 18-55	.02⅜		.02½	.02⅝
Grade 26-70	.01⅞	.02	.02⅛	
Grade 30-70	.01¾		.02	
*Low vapor pressure grades:				
15 lb. v.p. (max.)	.02½		.02¾	
11 lb. v.p. (max.)	.02⅝		.02⅞	
NORTH LOUISIANA—				
Grade 26-70	.02⅛	.02¼	.02⅜	.02½
CALIFORNIA—				
75-78 375	.03½	.04	.03¾	.04½

Kerosenes

(All kerosenes water white)

OKLAHOMA (Group 3)—	Mar. 7		Feb. 28	
41-43	.02¼	.02½	.02⅜	.02⅝
42-44	.02⅜	.02⅝	.02½	.02¾
NORTH TEXAS—				
40-41	.02		.02¼	
41-43	.02⅛	.02¼	.02⅝	.02½
†NORTH LOUISIANA—				
41-43	.03	.03¼	.03½	
42-44	.03¼		.03⅝	
†ARKANSAS—				
41-43	.03	.03¼	.03½	
PENNSYLVANIA (inland refineries)—				
45	.04½	.04¾	.04½	.04¾
46	.04½	.04¾	.04½	.04¾
47	.04¾	.05	.04¾	.05
CHICAGO (Based on Oklahoma Group 3)—				
41-43	.02¼	.02½	.02½	.02⅝
42-44	.02⅜	.02⅝	.02⅝	.02¾
*CALIFORNIA—				
38-40 high burning test	.03½	.04½	.03½	.04½
NEW YORK (Bayonne, N. J.)—				
41-43	.05¼		.05¼	.05½
GULF COAST (domestic)—				
41-43 water white	.04⅜	.04½	.04⅜	.04½

*For Pacific Coast consumption.

†For Arkansas, Louisiana and Mississippi delivery.

Furnace Oils and Tractor Fuels

OKLAHOMA (Group 3)—	Mar. 7		Feb. 28	
32-36 straw	.02½	.02¼	.02¼	.02⅜
36-38 straw	.01¾	.02	.02⅛	.02¼
38-40 straw	.01⅞	.02½	.02¼	.02¼
39-41 prime	.01⅞	.02⅛	.02⅛	.02⅜
NORTH TEXAS—				
38-40 straw	.02	.02¼	.02¼	.02½
†NORTH LOUISIANA—				
36-40	.02½	.02¾	.02¾	.03
†ARKANSAS—				
32-36	.02½	.02⅝	.02⅝	.02¾
CHICAGO (Based on Oklahoma Group 3)—				
32-36 straw	.02⅛	.02¼	.02⅜	.02½
38-40 straw	.02	.02⅛	.02⅝	.02½
38-40 prime white	.02⅛	.02¼	.02⅜	.02½
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.03½	.04	.03½	.04
NEW YORK (Bayonne, N. J.)—				
32-36	.04		.04	
36-40	.05		.05	
21 (industrial)	.03½		.03½	

Above prices are for distillate oils of zero cold test under 190° F. flash and good odor.

†For Arkansas, Louisiana and Mississippi delivery.

Gas Oil, Diesel Oil and Fuel Oil

Gas oil (G.O.) quoted per gallon basis; Diesel oil and fuel oil per barrel.

OKLAHOMA (Group 3)—	Mar. 7		Feb. 28	
32-36 (G.O.) cracking stock	.01½	.01¾	.01¼	.01⅜
U.G.I. (G.O.)	.01⅛	.01¼	.01¼	.01⅜
32-36 zero to 15 (G.O.) high flash	.01½	.01¾	.01¾	.02
28-30, zero to 10	.70	.85	.80	.90
26-30, zero to 10	.60	.65	.65	.70
24-26	.40	.45	.45	.55
20-22	.35	.40	.40	.50
Below 16	.32½	.37½	.35	.40
NORTH TEXAS—				
32-36 (G.O.) industrial	.01⅛	.01¼	.01¼	.01½
22-26	.35	.40	.40	.50
Below 20	.30	.35	.35	.40
†NORTH LOUISIANA—				
32-36 (G.O.) zero	.02½		.02¾	
14-16	.35		.35	
†ARKANSAS—				
30-32 (G.O.) zero	.02½	.02¾	.02¾	
14-16	.35		.35	
CHICAGO (Based on Oklahoma Group 3)—				
32-36 (G.O.) industrial	.01⅛	.01¼	.01⅜	.01⅝
28-30 (zero)	.80	.85	.90	.95
26-28 (zero)	.65	.70	.75	.80
22-26 (zero)	.52½	.55	.60	.65
18-22 (zero)	.42½	.45	.50	.55
Below 18	.40	.45	.45	.50
PENNSYLVANIA (inland refineries)—				
36-40	.03	.03¼	.03¼	.03½

Note: Fuel oils of more than 40 cold test generally 5 to 10 cents per barrel less in all areas than shown in above tables.

†For Arkansas, Louisiana and Mississippi delivery.

CALIFORNIA—				
30-34 (G.O.) per bbl.	.90	1.00	.90	1.00
27 plus Diesel	.90	1.00	.90	1.00
15-19 bunker (at tidewater)	.50	.60	.55	.65
15-19 (cargo lots)	.45	.55	.45	.60
15-19 (tank cars)	.35	.50	.35	.55
GULF COAST—				
28-30 (G.O.)	.03	.03¼	.03	.03¼
28-30 Diesel	1.50		1.50	
Bunker C (bulk cargoes)	.50		.50	
Bunker C (bunkers)	.60		.60	
NEW YORK (Bayonne, N. J.)—				
28 plus (G.O.)	.04		.03	.04
*28-30 Diesel	1.65		1.65	
26-30 Diesel (tank cars)	.04		.04	
†Bunker C	.75		.75	

*Lighterage 6½ cents per barrel.

†Lighterage 5 cents per barrel.

Petroleum Coke*

Prices per ton f.o.b. refineries in Chicago area.

Breeze (screenings)	4.50	4.50
Still runs	5.50	5.50
Lump and egg	6.50	6.50

*Refineries will absorb freight to 80 cents a ton.

Neutral Oils

(Viscosity at 100° F. and color)

OKLAHOMA (Group 3)—	Mar. 7		Feb. 28	
Zero to 10 Cold Test:				
150-3	.06¼	.06½	.06¼	.06½
180-3	.07½	.07¾	.07½	.07¾
180-4	.07	.07¼	.07	.07¼
200-3	.08	.08¼	.08	.08¼
200-4	.07¾	.08	.07¾	.08
240-3	.10	.10¼	.10	.10¼
240-4	.09¾	.10	.09¾	.10
280-3	.11	.11¼	.11	.11¼
280-4	.10½	.10¾	.10½	.10¾
300-3½	.11¼	.11½	.11¼	.11½
350-3½	.11¾	.12	.11¾	.12
400-4	.12¼	.12½	.12¼	.12½
500-4½	.13	.13¼	.13	.13¼
100-2 paraffin oil	.04¼	.04½	.04¼	.04½
15-30 Cold Test:				
200-3	.07¼	.07½	.07¼	.07½
200-4	.07	.07¼	.07	.07¼
240-3	.09¼	.09½	.09¼	.09½
240-4	.09	.09¼	.09	.09¼
280-3	.10¼	.10½	.10¼	.10½
280-4	.10	.10¼	.10	.10¼
PENNSYLVANIA—				
150 vis., No. 3, 400-405:				
Zero pour test	.11	.11½	.11	.11½
10 pour test	.10¾	.11	.10¾	.11
15 pour test	.08¾	.09¼	.08¾	.09¼
25 pour test	.08	.08¼	.08	.08¼
180 vis., No. 3, 25 pour test	.10¾	.11¼	.10¾	.11¼
200 vis., No. 3:				
Zero pour test	.15	.15½	.15	.15½
10 pour test	.14¼	.14¾	.14¼	.14½
15 pour test	.13	.13½	.13	.13½

25 pour test	.12½	.12¾	.12½	.12¾
GULF COAST—				
Pale Oils:				
100-2-2½	.05¼	.05½	.05¼	.05½
200-3	.06½		.06½	
300-3	.07¼	.07½	.07¼	.07½
500-3½	.09¼	.09½	.09¼	.09½
750-3½	.10¼	.10½	.10¼	.10½
1,200-3½	.12½		.12½	
2,000-4	.13½	.14	.13½	.14
Red Oils:				
200-5-6	.05¼	.05½	.05¼	.05½
300-5-6	.06½	.06¾	.06½	.06¾
500-5-6	.07½	.07¾	.07½	.07¾
1,200-5-6	.10½	.11	.10½	.11
2,000 6 plus	.12¼	.12½	.12¼	.12½
CALIFORNIA—				
Pale Oils:				
100-2½-3	.09	.10	.09	.10
200-2½-3	.10	.11	.10	.11
300-3-3½	.11	.11½	.11	.11½
350-3-4	.11½	.11¾	.11½	.11¾
400-3-4	.11¾	.12	.11¾	.12
450-3-4	.12	.12¼	.12	.12¼
550-3-4	.12¼	.12¾	.12¼	.12¾
Red Oils:				
200-4-5	.08¾	.09¾	.08¾	.09¾
300-5-6	.10	.10½	.10	.10½
350-5-6	.10½	.11	.10½	.11
400-5-6	.11	.11½	.11	.11½
450-5-6	.11½	.11¾	.11½	.11¾
500-5-6	.11¾	.12	.11¾	.12
600-5-6½	.12	.12¼	.12	.12¼
700-6½ plus	.12¼	.12½	.12¼	.12½
750-6½ plus	.12½	.12¾	.12½	.12¾
900-6½ plus	.13	.14½	.13	.14½

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Mar. 7	Feb. 28
630 light green	.06	.07	.07

600 light green S.R.	.04	.05	.04	.05
600 dark green S.R.	.03	.04	.03	.04
Bright Stocks:				
190-200 D	.14½	.15¼	.14¼	.15¼
150-160 D, 0-10	.13¼		.13½	
150-160 D, 10-25	.12¾		.13	
150-160 D, 25-40	.12¼		.12½	
150-160 E	.12¼		.12½	
PENNSYLVANIA—				
600 S.R.	.07¾	.08	.07¾	.08
650 S.R.	.10¾	.11¼	.10¾	.11
600 Pennsylvania flash	.11¾	.12¼	.11¾	.12¼
630 D filtered	.16¾	.17¼	.16¾	.17¼
600 E filtered	.12¼	.12¾	.12¼	.12¾
Pennsylvania Grade bright stock:				
Bright Stock, No. 8 color, 145-50 vis. 210-540-550 flash:				
10 pour test	.19½	.20½	.19½	.20½
15 pour test	.17⅛	.18½	.17⅛	.18½
25 pour test	.16½	.17	.16½	.17

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Mar. 7		Feb. 28	
124-126 white crude scale	.01⅝	.01¾	.01⅝	.01¾
PENNSYLVANIA—				
122-124	.02		.02	
124-126	.02⅛	.02¼	.02⅛	.02¼
NEW YORK (Bayonne, N. J.)—				
120-122	.02⅜		.02½	
125-127	.02¾		.02⅞	
130-132	.03		.03	
133-135	.03⅛		.03⅜	
135-137	.04⅛		.04	
Petrolatum in barrels in carload lots:				
Dark green	.01¾		.01¾	
Amber	.02		.02½	
Extra amber	.02⅜		.02½	
Lily white	.05⅝		.05½	
Snow white	.06⅜		.06½	
Cream	.04½		.04⅝	

Export Prices

GASOLINE				
GULF COAST—	Mar. 7		Feb. 28	
U. S. Motor	.03⅜	.03½	.03¼	
60-62 400	.03¾		.03½	.03¾
61-63 390	.03¾		.03½	.03⅞
64-66 375	.03⅞	.04	.03¾	
LOS ANGELES, CALIF.—				
U. S. Motor, 53-55 437 e.p.	.03¾	.04¼	.03⅜	.04¼
U. S. Motor, 65 octane num.	.04½	.04¾	.04¾	.05
U. S. Motor, 67 octane num.	.05		.05¼	
U. S. Motor, 69 octane num.	.05¼		.05½	
58-60 400 endpoint gasoline	.04¼	.05	.04¼	.05
KEROSENE				
GULF COAST—				
41-43 prime white	.04		.04	
41 water white	.04⅛	.04¼	.04⅛	.04¼
LOS ANGELES, CALIF.—				
41-43 water white	.03¾	.04¼	.03¾	.04¼
LUBRICANTS				
NEW YORK (f.a.s. in bbls.)—				
600 Warren E	.18		.18	
600 S.R. unfiltered	.14	.15	.14	.15
650 S.R. unfiltered	.16½		.16½	
600 flash S.R.	.18		.18	
630 flash S.R.	.23		.23	
Bright stock, No. 8 color	.23	.23½	.23	.23½
Bright stock, No. 6½ color, dil.	.22	.22½	.22	.22½
NEUTRALS				
NEW YORK—Pale Engine Oil, Bulk (vis. at 100)—				
230-3¾	.09¾		.09¾	
180-3¼	.09½		.09½	
100-2¼	.05		.05	
Red Engine Oil, Bulk (vis. at 100):				
300-6½	.09½		.09½	
250-6	.08½		.08½	
200-6	.07¾		.07¾	

Crude Oil Prices

Oklahoma, Kansas, North and East Central Texas

East Texas (see note) ..... $ .50
Corsicana, heavy (Jan. 20, 1933)* ..... .30
Other fields ..... See gravity table

East Texas posted by Tide Water Oil Co., January 18; Sinclair Prairie Oil Marketing Co., January 18; The Texas Company, January 20; Magnolia Petroleum Co., January 20; Shell Petroleum Corp. January 19; Panola Pipe Line Co., January 20; Humble Oil & Refining Co., January 20.
*Magnolia Petroleum Co.

West Texas

Iatan and Westbrook..Same as North Texas
Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Winkler and Pecos Counties ..... See note below
Lea County, N. Mex. ..... See Rocky Mountain table
Yoborg, Pecos County* ..... $ .40
Jones and Fisher Counties (Feb. 28, 1933)† ..... .30

Note—Crane, Upton, etc., effective January 19 by The Texas Company, 30 cents; followed by Humble Oil & Refining Co., Magnolia Petroleum Co., Gulf Pipe Line Co., on January 20, and by other purchasers.
*Shell Petroleum Corp., January 19, 1933.
†Humble Oil & Refining Co.

Texas Panhandle

Gray County, Wheeler County and Carson-Hutchinson Counties....See gravity table

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers ..... See gravity table
Jennings, La. (Jan. 20, 1933)* ..... $ .35
Cameron Meadows, La. (Jan. 20, 1933)† ..... Below 30 gravity 22 cents, differential 2 cents per degree beginning with 21-21.9 at 26 cents with 40 gravity and over at 52 cents.
Refugio, light ..... See gravity table
Refugio, heavy (Jan. 20, 1933)‡ ..... .45
Markham‡..See Gulf Coast gravity schedule
High Island§ ..... See Gulf Coast gravity schedule
Conroe ..... See note

*Gulf Refining Co. †Magnolia Petroleum Co. ‡Humble Oil & Refining Co. §The Texas Company. ¶Yount Lee Pipe Line Co.

Note—In the Conroe Field, effective January 19, Tide Water Oil Co. posted as follows: 35-35.9 degrees, 59 cents, with 1 cent added for each degree upward to 40 degrees and over, at 64 cents; January 20, Humble Oil & Refining Co. posted 35-35.9 degrees, 54 cents, with 2 cents added for each degree upward to 40 degrees and over at 64 cents. The Texas Company met Humble Oil & Refining Co. prices on March 6.

South Central and Southwest Texas

Darst Creek ..... See note below
Luling (Jan. 20, 1933) ..... $ .30
Mirando (Jan. 20, 1933) ..... .35
Pettus (Jan. 20, 1933) ..... .55
Salt Flat (Jan. 20, 1933) ..... .40
Lytton Springs (Jan. 20, 1933) ..... .45
Duval County (March 6, 1933) ..... .35
Saxet (March 6, 1933) ..... .45

Note—The Texas Company, January 19, followed by Humble Oil & Refining Co., Magnolia Petroleum Co. and Gulf Pipe Line Co., January 20. Magnolia Petroleum Co. in Luling; Magnolia, Humble and Gulf companies in Refugio crude; Humble and Gulf companies in Pettus; Humble and Gulf companies in Salt Flat; Magnolia Petroleum Co. in Lytton Springs. In Darst Creek, effective January 19, The Texas Company, 35 cents; effective January 20, Magnolia Petroleum Co., 35 cents; Humble Oil & Refining Co., 40 cents; Gulf Pipe Line Co., 40 cents Duval and Saxet posted by The Texas Company.

North Louisiana and Arkansas

Smackover, Ark. (all grades) ..... See note below
Urania, La. (Jan. 20, 1933) ..... $ .25
East El Dorado, Ark. (Jan. 20, 1933) ..... See note below
Other fields ..... See gravity table

Note—Smackover, all grades, effective January 19 by The Texas Company, 30 cents; January 20, Standard Oil Co. of Louisiana, 20 cents, Magnolia Petroleum Co. 30 cents, Gulf Refining Co. 30 cents, Louisiana Oil Refining Corp. 25 cents. Urania Field posted by Louisiana Oil Refining Co. and H. L. Hunt, Inc., East El Dorado, effective January 20, Magnolia Petroleum Co. 30 cents. Gulf Refining Co. 30 cents.

Eastern States

JOSEPH SEEP PURCHASING AGENCY
(Effective January 21, 1933)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field) $1.47
Pennsylvania Grade Oil in Southwest Pennsylvania Lines 1.17
Penna Grade Oil in Eureka Pipe Line Lines 1.12
Penna Grade Oil in Buckeye Pipe Line Lines ..... .97
Corning Grade Oil in Buckeye Pipe Line Co.'s line (Jan. 20, 1933) ..... .70
Ragland Grade Oil in Cumberland Pipe Lines (Kentucky) (Jan. 10, 1931) ... .60

PENNZOIL CO.
(Effective January 21, 1933)

Pennsylvania Grade Oil in National Transit Lines:
Group A $1.42
Includes Cochran, Franklin, Hamilton and Doolittle districts.
Group B 1.41
Includes Titusville district.
Group C 1.40
Includes Turkey and Tidioute districts.
Group D 1.39
Includes Bear Creek and Porkey districts.
Group E 1.37
Includes Eldenau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jamieson, Kennerdell, Emlenton, Tiona, Lacy and Kinzua districts.
Price depends on length of pipe line haul to plant at Oil City.

TIDE WATER PIPE CO.
(Effective January 21, 1933)

Bradford, Pa. $1.47
Allegany, N. Y. 1.47

PURE OIL CO.
(Effective January 21, 1933)

Cabin Creek, W. Va. $1.12
Bradford Hollow, W. Va. 1.12
Kelly's Creek, W. Va. 1.12

Rocky Mountain States

OHIO OIL CO.-STANOLIND OIL & GAS CO.
Ilex, light (Jan. 18, 1933) ..... $ .40
Ilex, heavy (Jan. 18, 1933) ..... .34

(Continued on Page 31)

Crude Oil Gravity Table

Degrees of gravity—	Kansas, Oklahoma, North Texas, Central Texas, East Central Texas 1	North Louisiana and Arkansas 2	North Louisiana and Arkansas 3	Gray County, Texas 4	Carson, Hutchinson and Moore Counties, Texas 5	Gulf Coast, Texas and Louisiana 6	Gulf Coast, Texas and Louisiana 7	Salt Creek, Wyoming 8
Below 20	....	....	....	....	....	$.45	$.32	....
20-20.9	....	....	....	....	....	.45	.34	....
21-21.9	....	....	....	....	....	.45	.36	....
22-22.9	....	....	....	....	....	.46	.38	....
23-23.9	....	....	....	....	....	.47	.40	....
24-24.9	....	....	....	....	....	.48	.42	....
Below 25	....	....	....	....	....	....	....	....
25-25.9	....	....	....	....	....	.49	.44	....
26-26.9	....	....	....	....	....	.50	.46	....
27-27.9	....	....	....	....	....	.51	.48	....
28-28.9	....	....	....	....	....	.52	.50	....
Below 29	$.28	$.28	$.20	....	....	....	....	$.28
29-29.9	.30	.30	.22	....	....	.53	.52	.30
30-30.9	.32	.32	.24	....	....	.54	.54	.32
31-31.9	.34	.34	.26	....	....	.55	.56	.34
32-32.9	.36	.36	.28	....	....	.56	.58	.36
33-33.9	.38	.38	.30	....	....	.57	.60	.38
34-34.9	.40	.40	.32	....	....	.58	.62	.40
35-35.9	.42	.42	.34	$.30	$.20	.59	.62	.42
36-36.9	.44	.44	.36	.32	.22	.60	.62	.44
37-37.9	.46	.46	.38	.34	.24	.61	.62	.46
38-38.9	.48	.48	.40	.36	.26	.62	.62	.48
39-39.9	.50	.50	.42	.38	.28	.63	.62	.50
40 and over	.52	52	44	.40	.30	64	62	.52

Note—Effective January 20, the Standard Oil Co. of Louisiana posted the following prices in North Louisiana and Arkansas: Caddo, below 29 gravity, 20 cents; 40 gravity and above, 44 cents. Sabine and De Soto, below 29 gravity, 25 cents; 40 gravity and above, 49 cents. Homer, below 29 gravity, 28 cents; 40 gravity and above, 53 cents. Sarepta and Cartersville, below 29 gravity, 17 cents; 40 gravity and above, 41 cents. El Dorado, below 29 gravity, 25 cents; 40 gravity and above, 49 cents. Haynesville, below 29 gravity, 19 cents 40 gravity and above, 43 cents. The above all carry 2 cents differential for each degree in gravity. Smackover, all grades, 20 cents.

Column 1—Effective January 18, Stanolind Crude Oil Purchasing Co., Sinclair Prairie Oil Marketing Co.; January 19, The Texas Company; January 20, Magnolia Petroleum Co (starting at below 25 degrees, 20 cents, with 2 cents added for each degree upward); January 20, Carter Oil Co. in Oklahoma and Kansas and Humble Oil & Refining Co. in North Central and East Central Texas; January 20, Gypsy Oil Co. in Oklahoma and Kansas and Gulf Production Co. in North, Central and East Central Texas; January 18, Globe Oil & Refining Co. and Tide Water Oil Co. in Kansas and Oklahoma; January 19, Empire Pipe Line Co., Shell Petroleum Corp.; January 18, in Oklahoma, Deep Rock Oil & Refining Co. Barnsdall Refineries, Inc., Continental Oil Co., Bell Oil & Gas Co., Tide Water Oil Co., Champlin Refining Co., Anderson-Prichard Corp., Cushing Refining Co., Eason Oil Co., Johnson Oil Refining Co., Mid-Continent Petroleum Corp., Pepper Gasoline Co., Sunray Oil Co., Yale Oil Corp., Twin State Oil Co., Rock Island Refining Co.; January 20, Phillex Oil Co. and Pure Oil Co.; Oklahoma and North Texas, January 18, Continental Oil Co.; Kansas January 18, Eldorado Refining Co., Vickers Petroleum Co., Skelly Oil Co. (starting below 25 degrees, 20 cents, with 2 cents added for each degree upward); January 19, White Eagle Oil Corp. Effective March 1 Derby Oil & Refining Co. posted in Kansas as follows: Below 29 degrees 28 cents, with 2 cents added for each degree up to 40.9, inclusive, at 52 cents; 41-41.9 degrees, 56 cents; 42 degrees and above, 60 cents. In the Stratman and Stoltenberg Pools, 52 cents flat.

Column 2—The Texas Company, January 19; Louisiana Oil Refining Co., January 20; Gulf Refining Co., January 20 (starting at below 25 degrees, 20 cents, with 2 cents added for each degree upward). For Standard Oil Co. of Louisiana schedule see note below price table.

Column 3—Magnolia Petroleum Co., January 20.

Column 4—Effective February 28, 1933, Humble Oil & Refining Co. Effective January 20, Phil Tex Oil Co. Effective March 6, The Texas Company. March 7, Magnolia Petroleum Co.

Column 5—Effective February 28, 1933, Humble Oil & Refining Co. Effective January 20, Phil Tex Oil Co. Effective February 28, Continental Oil Co. Effective March 6, The Texas Company. March 7 by Magnolia Petroleum Co.

Column 6—Effective March 6, 1933, The Texas Company.

Column 7—The Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Sun Oil Co., January 20.

Column 8—Stanolind Oil & Gas Co., January 18.

(California Crude Oil Prices on Page 31)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

March 7, 1933

Taxes

The gasoline quotations given in the following tables include the 1-cent Federal tax as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third or competitive grade is generally available at 1.5 or more cents per gallon under the service station price for the regular grade. Ethyl Gasolines are sold 2 cents above the service station price for the regular grade.

Standard Oil Co. (Indiana)

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Chicago	14 1	14.1	4.0	10.0
Decatur, Ill.	15.6	15.6	4.0	10.1
E. St. Louis	14.9	13.9	4 0	9.3
Joliet	15.6	14.6	4.0	8.6
Peoria	15 6	15.6	4.0	10.1
Quincy	15.4	15.4	4.0	9.9
Davenport, Ia.	15 7	15.7	4.0	10 4
Des Moines	15.7	15.7	4.0	9.0
Mason City	15 7	15.7	4.0	9.0
Sioux City	15 3	15 3	4.0	10 0
Duluth, Minn.	16.7	16.7	4 0	11.9
Mankato	16.3	16.3	4.0	8.1
Minneapolis	14 4	14 4	4 0	11.0
LaCrosse, Wis.	17.4	17.4	5.0	11.1
Green Bay	16.8	16.8	5.0	10.5
Milwaukee	16.3	16.3	5.0	10.0
Madison	16 5	16.5	5.0	10.2
Detroit, Mich.	15 0	15.0	4.0	8.0
Grand Rapids	15.5	15.5	4.0	8.0
Saginaw	15.8	15.8	4.0	10.8
Evansville, Ind.	16 2	16.2	5.0	†13.9
Indianapolis	16.4	16.4	5.0	†14.1
South Bend	16.7	16.7	5.0	†14.4
Fargo, N. D.	18.1	18.1	4.0	13.0
Huron, S. D.	17.5	17.5	5.0	10.0
Sioux Falls	17.0	17.0	5.0	10.0
K. C., Mo.*	14.1	14.1	4.0	7.0
Springfield*	15.0	15.0	4.0	8.0
St. Louis	12.0	11.5	3.5	9.4
St. Joseph*	13.0	10.9	4.0	7.5
Wichita, Kans.	13.9	13.9	4.0	7.0
Bartlesville, Okla.	13.6	16.0	5.0	8.0

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

†Includes 4-cent tax. Buyers of kerosene not used as motor fuel can secure refund of tax.

Effective November 4—New dump discount applicable on all grades of gasoline sold from tank wagon. Any tank wagon customer buying 25 gallons or more at one time will be given 1-cent discount per gallon off tank wagon price at time of delivery. Customers not under contract receive no other discount.

Effective January 1—Discounts on Q.D.A. on 500 gallons or more per month throughout territory; Red Crown Ethyl Gasoline, 2 cents off tank wagon price; Red Crown gasoline, 2½ cents off tank wagon price; Stanolind Blue gasoline, 1 cent off tank wagon price. On deliveries of 75,000 gallons or more each classification allowed 1 cent additional discount.

Discounts on resellers authorized agent's agreement: Same amounts as above except made off service station price instead of tank wagon price.

Stanolind Furnace Oil in Chicago

Effective November 1, 1932, prices f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. zero), 100 gallons or more, 7 cents; No. 2 (30-34 stw. zero), 150 gallons or more, 6½ cents; No. 3 (22-26 zero), 400 gallons or more 5.75 cents; No. 4 (12-16 zero), 400 gallons or more, 4.75 cents. Viscosity of No. 4, 90-115 at 100° F.

Fuel Oils

Associated Distributors Prices

Spot market prices on 350 gallons or over deliveries, and top prices on contracts, respectively: 38-40, 7 and 8 cents; 32-36 light, 6¾ and 7¾ cents; 32-36 dark, 6½ and 7½ cents; 28-30, 6¾ and 6¾ cents; 24-26, 5 and 6 cents; 18-22, 4¾ and 5¾ cents. On deliveries of less than 350 gallons the spot price is one-half cent higher.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Dallas, Tex.	12.5	15.0	5.0	7.0
Fort Worth	12.5	15.0	5.0	7.0
Houston	12.5	15.0	5.0	8.0
San Antonio	12.5	15.0	5.0	8.0
El Paso	12.5	15.0	5.0	10.0
Texarkana	*15.0	15.0	5.0	†11.0
Muskogee, Okla.	9.5	12.0	5.0	8.0
Okla. City	11.5	14.0	5.0	8.0
Tulsa	12.5	15.0	5.0	8.0
Ft. Smith, Ark.	*13.5	13.5	5.0	†10.0
Little Rock	15.5	15.5	7.0	†10.0

*Less 2½ cents to dealers. †Less 2 cents to dealers.

Southern District

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Atlanta, Ga.	20 0	20.0	7.0	12.0
Augusta	20.0	20 0	7.0	11.0
Macon	20 0	20 0	7 0	11.0
Savannah	20 0	20 0	7.0	12.5
Birm'ham, Ala.	17 0	17 0	8 0	12.0
Mobile	20.0	20.0	8.0	8.0
Montgomery	21.0	21.0	8.0	14.0
Jackson, Miss.	18 0	18.0	7.0	11.0
Vicksburg	18 0	18 0	7.0	9.0
Jack'ville, Fla.	21 0	21.0	8.0	11.0
Miami	21.0	21 0	8 0	12 5
Pensacola	18 0	18.0	8.0	12 0
Tampa	19.0	19.0	8 0	13.0
Lexington, Ky.	18.5	18 5	6.0	10.0
Covington	17 0	17 0	6.0	11 5
Louisville	18.0	18 0	6 0	10 0
Paducah	19.0	19.0	6.0	9.0

A third grade "Kyso Green" is sold at a price generally 2 cents below the price on the regular grade.

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline. To Pensacola, Montgomery and Birmingham state taxes add 1-cent tax. To Mobile state tax add 1-cent city tax. Dealers receive discount of 3 cents off tank wagon price throughout territory.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Denver, Colo.	14 0	17.0	5 0	12.5
Pueblo	14 0	17 0	5 0	12 5
Grand Jnctn.	18 0	21 0	5.0	14.5
Casper, Wyo.	16.0	19 0	5.0	10.0
Cheyenne	14 0	17.0	5 0	11 5
Butte, Mont.	20 0	23 0	6 0	17.0
Billings	21.0	24 0	6 0	15.5
Great Falls	21 0	22 0	6.0	17 0
Helena	21.0	24 0	6 0	17 0
Salt Lake, Utah	16.0	19.0	5.0	16.0
Albu'que, N. M.	16 0	19.0	*7 0	14 0
Boise, Idaho	20.5	23 5	6.0	18 0
Twin Falls	20 5	23 5	6.0	18.0

*One-cent city tax.

Central South District

STANDARD OIL CO. (LOUISIANA)

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
N. Orleans, La.	15.5	15 5	*7 0	†11.0
Baton Rouge	15 0	15 0	6.0	†10 0
Alexandria	14 0	14.0	7.0	†8.5
Lafayette	15.0	15.0	7 0	†10.0
Lake Charles	15 0	15 0	7.0	†10 0
Shreveport	14.0	14 0	6 0	†11.0
Knoxville, Tenn.	19.5	19.5	8.0	12.5
Memphis	18.0	18 0	8.0	10.0
Chattanooga	19 0	19.0	8 0	12 0
Nashville	19 0	19 0	8.0	12.0
Bristol	18.5	18.5	8 0	13.0
Lt. Rock, Ark.	15.5	15 5	8 0	10.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

Two-cent discount off kerosene tank wagon price and 2½ cents off gasoline tank wagon price to dealer and commercial accounts.

Ohio

STANDARD OIL CO. (OHIO)*

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Ohio points	14.5	15.0	5.0	*12.0

*Two cents off on gasoline tank wagon to dealers and commercial accounts; 2½ cents off tank wagon and kerosene to dealers.

Nebraska

STANDARD OIL CO. (NEBRASKA)

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Omaha	16 3	17.3	5.0	9 0
McCook	17.0	17.0	5.0	8.5
Norfolk	16.8	17.8	5.0	10 75
N. Platte	17 0	17 0	5.0	9.0
Scottsbluff	17.0	17 0	5.0	10 0

Note — Dealers' discount allowed as follows: Red Crown Ethyl, 3 cents off station price; Red Crown, 2½ cents off normal service station price; Nebraska Blue (third grade), 1 cent off normal service station price.

New York and Part of New England District

STANDARD OIL CO. (NEW YORK)*

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Albany, N. Y.	14.0	15.0	4.0	9.0
New York	13.5	13.5	4.0	9.5
Buffalo	13.5	14 5	4.0	9.0
Rochester	14.5	15.5	4.0	9.0
Syracuse	15.0	16.0	4.0	9.5
Boston, Mass.	14 0	14.0	4.0	8 0
Augusta, Me.	17 0	18.0	5.0	9.0
Manch'tr, N. H.	16.5	17.5	5.0	8.0
Burlington, Vt.	17.0	18.0	5.0	8.5

*Discount schedule to commercial accounts are as follows: At service stations, 1 cent per gallon; tank wagon deliveries up to 20,000 gallons monthly, 2 cents per gallon; 20,000 to 100,000 gallons, 2½ cents; 100,000 to 300,000 gallons, 3 cents; 300,000 gallons and up, 3½ cents.

Atlantic Coast District

STANDARD OIL CO. (NEW JERSEY)

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Atl'tic, City, N.J.	14.0	15.0	4.0	11.2
Newark	13 3	14 3	4.0	8.5
Annapolis, Md.	14 6	15 6	5.0	9.0
Baltimore	14.0	15.0	5.0	8.0
Cumberland	15.5	16.5	5.0	11.7
Wash'g'n, D. C.	12.2	13 2	3.0	10.0
Danville, Va.	16 7	17.7	6.0	11.9
Norfolk	15.1	16.1	6.0	10.3
Petersburg	16 2	17.2	6 0	11 4
Richmond	15.5	16 5	6.0	10.7
Roanoke	16.7	17.7	6 0	11.9
Charls'n, W. Va.	15 4	16 4	5.0	11.6
Parkersburg	14.0	15 0	5.0	10.2
Wheeling	15.0	16 0	5 0	11 2
Charlotte, N. C.	17.3	18.3	7.0	12.5
Hickory	18 5	19.5	7.0	12.7
Mt. Airy	18.6	19 6	7.0	12 8
Raleigh	17 1	18 1	7.0	12 3
Salisbury	18.4	19.4	7.0	13.6
Charleston, S.C.	16.1	17.1	7.0	10 3
Columbia	18.0	19.0	7.0	12.2
Spartanburg	15.0	16.0	7.0	12.5

Two cents per gallon discount off tank wagon price of gasoline to dealers except Washington, D. C., and Baltimore, Md., where discount is 3 cents. Kerosene 1 cent off tank wagon for 25 gallons or more under contract except New Jersey.

Naphtha

	Tank-Wagon	Car
Oleum spirits	10.7	6.22
V.M.&P. naphtha	12.7	7.23
Cleaners' naphtha	15.2	9.23
Stanisol	15.2	9.23

Tank wagon prices f.o.b. Chicago, January 6, 1932. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Canada

IMPERIAL OIL, LTD.

Imperial 3-Star Gasoline

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Hamilton, Ont.	22.5	25 5	6 0	15 5
Toronto, Ont.	22.5	25.5	6 0	15 5
Brandon, Man.	29.0	32.5	7.0	17.5
Winnipeg, Man.	26.0	29.5	7.0	17.5
Regina, Sask.	29.0	33.0	6.0	21.5
Saskatoon, Sask.	31.0	35.0	6.0	23 5
Edmonton, Alta.	29.0	32.5	5.0	22.5
Calgary, Alta.	25.5	29.0	5.0	10.0
Vancouver, B.C.	26.5	29.5	7.0	22 5
Montreal, Que.	22.0	25.0	6.0	15 0
St. Johns, N.B.	24.5	28 5	7.0	20.5
Halifax, N.S.	23.5	27.5	6.0	20 5

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline: Tank truck†	Posted retail	Incl'ds tax of	Kero. tank wagon
Fresno	19.0	18.0	4.0	14 0
San Francisco	19.0	18.0	4.0	12.5
Los Angeles	16.5	15.5	4.0	12 5
Reno, Nev.	23.0	22.0	5.0	15.5
Portland, Ore.	16.4	15.4	5.0	13.5
Seattle, Wash.	17.4	16.4	6.0	13.5
Tacoma	17.4	16.4	6.0	13.5
Spokane	20.9	19.9	6.0	18 0
Phoenix, Ariz.	18.0	20.0	6.0	‡16.0

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent. ‡Includes 5-cent state tax.

Pennsylvania-Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Pittsburgh, Pa.	13.0	14.0	4.0	9.0
Philadelphia	13.0	13.0	4.0	9.0
Scranton	13.5	14.5	4.0	9.0
Allentown	13.5	14.5	4.0	9.0
Altoona	13.5	14.5	4.0	9.0
Erie	13.0	14.0	4.0	9.0
Dover, Del.	13.5	14.5	4.0	9.0
Wilmington	13.0	14.0	4.0	9.0
Springf'd, Mass.	14.5	14.5	4.0	8.0
Worcester	14.5	15.5	4.0	8.0
Boston	14.5	15.5	4.0	8.0
Providence, R.I.	12.5	13.5	3.0	8.0
Hartford, Conn.	12.5	12.5	3.0	8.0
New Haven	12.5	12.5	3.0	8.0

Discount schedule effective November 1, 1932. In Delaware and Pennsylvania, 2 cents off station price on purchases of 2,000 gallons or more per month, in remainder of territory 1 cent. Wholesale discount 2½ cents per gallon on monthly deliveries of 20,000 to 100,000 gallons, 3 cents on 100,000 to 300,000 gallons, and 3½ cents on more than 300,000 gallons.

TANK WAGON CHANGES

(Regular Grade Gasoline and Kerosene)

Standard Oil Co. of New Jersey, effective February 24, advanced gasoline service station price 1 cent at Charlottte, N. C.

Continental Oil Co., effective January 6, reduced gasoline tank wagon and service station price 1 cent at Salt Lake City, Utah. This reduction was not previously announced.

Standard Oil Co. (Nebraska), effective February 28, reduced kerosene tank wagon price 3.3 cents at McCook, Neb.

Standard Oil Co. (Ohio), effective March 2, advanced gasoline tank wagon and service station prices 1 cent in Ohio.

Magnolia Petroleum Co. reduced the gasoline tank wagon and station prices in Muskogee, Okla., to 9.5 and 12 cents March 3.

CRUDE OIL PRICE CHANGES

See Page 10 for crude oil price changes in California, Gulf Coast, Southwest Texas, Texas Panhandle and West Texas.

Make Survey of Texas Oil For Nominating Purposes

Preliminary to working out a new plan for nominating purchases of crude oil for refiners and crude oil purchasing companies a survey is being made of the crude oil produced in Texas. The survey is conducted under the direction of William F. Knode, chief engineer of the oil and gas division of the State Railroad Commission. The survey is to include a distillation test of the crude, base of crude, gravity and other data of aid to refiners in determining the manufacturing value.

With this information, according to Col. Ernest O. Thompson of the Texas Railroad Commission, refiners and other crude oil buyers will be permitted to make their nominations based on the quality of the crude desired. In the past it has been customary to nominate crude oil by fields. Some producers have maintained that this latter method is unfair to the fields producing the best grades because if refiners were given a choice they would nominate crude from these fields rather than from pools producing crude oil of low value. It is expected that this method will result in an enlarged demand for East Texas crude oils.

OUSTER SUIT POSTPONED

AUSTIN, Tex., Mar. 7.—Postponement of Attorney General James V. Allreds' $14,850,000 maximum penalty and ouster suit against the Standard Oil Co. and 14 other oil companies, and two marketing associations, based on their adherence to the oil men's code of ethics and marketing practices, was ordered by District Judge J. D. Moore today. The case will be reset after adjournment of the legislature. Continuance was granted on affidavit of T. H. McGregor, house member, that he is an attorney for the Humble Oil & Refining Co., one of the defendants.

NEWS FOR SALES DEPARTMENTS

Large Increase in Exports for January Over December

WASHINGTON, D. C., Mar. 4.—Exports of petroleum from the United States took a big jump in January, gaining 22 per cent over December's figures, a report compiled by the Department of Commerce disclosed today.

Total shipments from this country for January amounted to 7,999,000 bbls. valued at $15,667,000, compared with 6,574,000 bbls. valued at $13,622,000 for December, 1932, the report said. January's exports were only 5 per cent less than the corresponding month of 1932.

Imports during January amounted to 3,993,000 bbls., a gain of only two-tenths of 1 per cent over December, but far below the 5,683,000 bbls. imported in January, 1932.

Gasoline exports advanced 23 per cent in volume to 2,250,000 bbls., gas and fuel oil advanced 61 per cent to 1,994,000 bbls., kerosene advanced 38 per cent to 872,000 bbls., and lubricating oils 20 per cent to 539,000 bbls. Petroleum coke and asphalt also advanced, to 16,490 tons and 15,259 tons, respectively. There was little change in exports of parrafin, but crude oil and greases declined to 1,913,000 bbls. and 5,267,000 pounds in percentages of 11 and 19, respectively.

Though United States exports of petroleum products declined 20,000,000 bbls. in 1932, oil imports also fell off, giving this country a favorable trade balance of $147,905,993 at the close of the year, according to figures made public today by the Department of Commerce.

Exports amounted to the equivalent of 99,716,182 bbls., valued at $209,067,710 as compared with 119,729,224 bbls. valued at $93,976,196 in 1931, the Federal report showed.

The decline in petroleum imports was from 86,519,409 bbls. valued at $93,976,196 in 1931 to 75,176,918 bbls. valued at $61,161,707 last year.

Independent Dealers Bring Suit in New Jersey Court

NEW YORK, Mar. 6.—With gasoline markets reflecting the price war now prevalent in New York City, independent gasoline dealers at Newark, N. J., have asked the Chancery Court there to restrain refiners from selling motor fuel to company-owned distributors at a figure less than the independent filling stations are charged. The independent dealers obtained an order requiring the producers to show cause why they should not be enjoined from charging their own stations less than they do the independents.

In the complaint filed by the independent dealers it is alleged that the company-owned stations buy gasoline at 9.9 cents per gallon, while the independents pay 11.3 cents. The action is directed against the Standard Oil Co. of New Jersey, Shell Eastern Petroleum Products, Inc., The Texas Company, Gulf Refining Co., Sun Oil Co., Tide Water Oil Sales Corp., Sinclair Refining Co., Cities Service Oil Co., and the American Petroleum Institute.

START MARATHON PROJECTS

FORT WORTH, Tex., Mar. 6.—Ground has been broken for a new cracking installation and other equipment at Marathon Oil Co.'s 5,000-bbl. refinery at Fort Worth. New equipment and installation will cost approximately $600,000 and will take about three months to complete. Nathan H. Jones, superintendent for the Kellogg Co., is in charge of the construction and engineering work on the plant.

Explains Manufacture and Sale Problems of Gasoline-Alcohol Motor Fuels

By G. G. BROWN*

As professor of Chemical Engineering in the University of Michigan, in charge of fuel and petroleum research, I am frequently called upon to advise various governmental bodies on fuel and petroleum problems. Once before I was privileged to advise the State of Iowa through the attorney general on an important fuel problem. I have been asked to consider the proposed bill from the point of view of a fuel or combustion engineer, since this bill proposes to convert corn into a liquid fuel to be burned with gasoline in automobile and tractor engines.

The careful data which have been presented in the various reports, and references to the literature indicate that fuel composed of gasoline blended with 10 per cent alcohol, when delivered to the vehicle in which it is to be used, can be made to function in a reasonably satisfactory manner at least for a short period of time. The energy obtained from a fuel depends almost entirely upon its heat value. As frequently indicated, the heat value of alcohol is about two-thirds that of gasoline. This explains the fact that the miles obtained from a gallon of fuel under steady driving conditions will be decreased about 4 per cent for every 10 per cent of alcohol contained in the blend.

In the case of continued use of such a fuel there are a number of difficulties that will be encountered and which must be overcome before the technical success of alcohol blends as motor fuels can be assured.

1. Alcohol is an excellent solvent for shellac which is used as a protective coating for cork floats used in carburetors and gasoline gauges. The continued use of fuel containing alcohol will necessitate the replacement of all such floats at some cost and annoyance to the driver of the car.

2. Alcohol has a marked tendency to remove scale and foreign material from metal surfaces. This is commonly observed in the use of alcohol as an antifreeze in the radiator of a car. The scale and other matter set free from the fuel tank of the car frequently causes stoppage of the fuel lines and screens in the carburetor, a serious cause of aggravation to the user of fuels containing alcohol.

3. Corrosion difficulties and excessive wear of the moving parts of engines have been reported from the use of alcohol fuels. Pure alcohol is probably noncorrosive but various impurities frequently found in the commercial product and some produucts formed during burning of alcohol in the engine, may have a corrosive action.

4. The immediate important practical difficulty in the use of alcohol blends is their instability in the presence of small amounts of water. The first large scale experiment in the use of alcohol blends as motor fuels was conducted a few years after the war in the eastern part of this country. These fuels were marketed particularly in the Baltimore district which was and is a popular territory for trick motor fuels. At that time gasoline was retailed in this district for upwards of 30 cents per gallon, and excess war stocks of dehydrated alcohol were available at considerably lower prices. Even under a favorable price differential these experiments were abandoned within a few months because of the great difficulty and expense caused by the separation of the alcohol from the gasoline in storage and service station tanks, forcing the company holding the excess alcohol stocks to continue the marketing of alcohol itself until the excess stocks were reduced.

*Testimony at hearing before committee of Iowa Legislature.

Trouble With Water

Water will not mix with gasoline. Any moisture getting into gasoline tanks therefore settles to the bottom of the tank. The oil companies maintain regular inspection service for gauging the water which accumulates in the bottom of the tanks from the atmosphere, and provide means for pumping the water layer underneath the gasoline, out of the tanks whenever the water level rises a few inches and gets near the gasoline outlet which is about 6 inches from the tank bottom. Frequently these tanks of about 1,000-gallon capacity have to be pumped out about twice a year and many of them collect water at the rate of 10 to 20 gallons per year.

A blend containing 10 per cent of 99.5 per cent alcohol is made unstable by the addition of less than one-fourth of 1 per cent of water, or less than 2½ gallons in a full 1,000-gallon tank. This water, which will accumulate in a few weeks, makes the alcohol separate from the gasoline and collect with the water in the lower part of the tank. If this happens in a tank even less than one-half full, the service station will deliver the water-alcohol mixture from the bottom of the tank, giving an unsatisfactory fuel and removing the alcohol from the fuel in the tank. Upon inspection, the service station tanks will then be found to be filled with gasoline not containing the quantity of alcohol required by law, and the agent will be unjustly accused and possibly fined.

Blending agents will increase the stability of these blends but will not eliminate the difficulty, and the presence of water in a slightly larger proportion will still cause the alcohol to separate from the gasoline.

These difficulties may or may not be insurmountable but their presence brands the whole project of the commercial use of marketing alcohol in motor fuel in this country a huge experiment.

Use in Foreign Countries

It has been inferred that alcohol fuels are widely and satisfactorily used in foreign countries. In all such cases the price of gasoline varies from about 30 to 35 cents per U. S. gallon, as was the case when the experiment was tried in the eastern part of this country. But more important, the alcohol industry in these countries, most of which have no domestic sources of petroleum products, is heavily subsidized because of the importance of a national internal supply of motor fuel in the case of war, and because of the direct importance of alcohol itself in the manufacture of munitions of war.

In spite of the high cost of gasoline and the government subsidies to the alcohol distiller, the public is very reluctant to use alcohol fuels when undiluted gasoline is available. Where alcohol blends are generally marketed in foreign countries it is actually accomplished by the sale of such fuels in small sealed individual containers, by the use of large

(Continued on Page 31)

Average Loss of 15 Per Cent By Major Iowa Companies

The gasoline sales of the first 15 distributors in Iowa decreased 15.1 per cent in 1932 compared to 1931 according to information based on gasoline tax reports. These 15 companies have approximately 60 per cent of the entire gasoline gallonage in Iowa. The decrease for the entire State was approximately 14 per cent.

Of the first 15 companies in Iowa all showed decreases in 1932 with the exception of the Skelly, Texas, White Eagle, Continental and Marathon companies. The largest total and percentage gain was that of the Continental Oil Co. whose 1932 gallonage was 23.9 per cent greater than in 1931.

Among the companies showing losses, the gallonage of the Standard of Indiana decreased over 18,000,000 gallons or 17.2 per cent. The largest percentage loss was that of the MonaMotor Oil Co. (Barnsdall) with a total of 41.7 per cent. The following table gives the gasoline sales in gallons by companies:

	Gasoline consumption 1932	Gasoline consumption 1931	1932 dec. per cent
Standard of Ind.	86,460,105	104,504,904	17.2
Phillips Pet. ..	23,907,031	27,168,475	12.0
Mid-Continent .	20,507,876	24,612,540	16.2
Sinclair Ref. ..	15,514,453	19,943,460	22.2
Shell Pet.	14,651,379	20,182,236	27.4
Skelly Oil	12,595,262	12,116,129	*3.1
Cities Service .	12,151,659	14,143,299	14.1
The Texas Co..	7,161,689	6,525,897	*8.8
Deep Rock Oil .	4,603,346	4,620,137	0.3
Champlin Ref..	4,403,829	5,581,095	12.6
White Eagle ..	3,769,461	3,727,440	*1.1
Continental ...	3,746,447	3,032,401	*23.9
National Ref. ...	3,198,960	3,556,064	10.0
Marathon Oil ..	2,639,983	3,459,821	*6.8
MonaMotor Oil.	2,607,058	4,472,626	41.7
Total	217,918,538	256,633,513	15.1

*Increase.

LARGE REFUNDS IN TEXAS

AUSTIN, Tex., Mar. 6.—More than 10 per cent of the gasoline tax collected during the last fiscal year was refunded to farmers and others who are exempt from paying the tax, according to a compilation in the comptroller's office. The report showed that for the last fiscal year a total of $31,488,153 was collected and $3,275,141 returned.

The division handled 78,838 separate claims in making this refund. Refunds by amounts: Farmers, $21,009,431; municipalities, including counties, $262,022; contractors, $328,064; aircraft, $83,443; marine, $46,876; dry cleaners, $3,521; oil operators, $185,793; railroads, $130,154; miscellaneous, $130,698.

In addition the tax was returned to the amount of $56,574 on export gasoline, and $38,120 on governmental gasoline.

REYNOLDS HEADS LAKE CO.

CHICAGO, Mar. 4.—John D. Reynolds, who has acted as counsel for oil interests, has been elected president of Lake Petroleum Co. M. G. McGrath has been made director in charge of sales, and with him will be associated E. S. Dwyer. Mr. Reynolds was for several years secretary of Western Oil Jobbers Association. John Carson recently relinquished his interest in Lake Petroleum Co. to give all his time to his work with the Chicago Heating Oil Distributors Association, of which Aaron Sapiro is head.

LOSES FOREIGN BUSINESS

The annual report of the Atlantic Refining Co. states that its loss of 8 per cent in gallonage in 1932 was wholly traceable to foreign business and reduced gross operating income to $84,631,430, a decline of $13,621,000 from 1931.

NEWS FOR PETROLEUM REFINERS

Consumption of Gasoline Declined 7.26 Per Cent

Domestic gasoline consumption declined 1,165,129,000 gallons in 1932, or 7.26 per cent compared to the previous year. This decline was distributed almost proportionately among the states except that Delaware, Maryland, Rhode Island and the District of Columbia showed slight increases. The states in the industrial and farming areas in the Middle West lost gallonage at a faster rate during the year than the average.

The following consumption figures for gasoline were compiled by the American Petroleum Institute based upon tax statements from the various states with adjustments made in conformity to reports on total consumption compiled by the Bureau of Mines.

GASOLINE CONSUMPTION BY STATES DURING 1931 AND 1932

State—	12 months ending with Dec., 1932 gallons	Dec., 1931 gallons
Alabama	136,436,000	162,672,000
Arizona	69,592,000	74,461,000
Arkansas	114,031,000	127,074,000
California	1,352,570,000	1,401,544,000
Colorado	158,614,000	176,494,000
Connecticut	245,184,000	*247,891,000
Delaware	38,259,000	38,106,000
Dist. of Col'mbia	102,675,000	93,493,000
Florida	208,913,000	221,988,000
Georgia	199,038,000	221,893,000
Idaho	52,392,000	59,753,000
Illinois	950,822,000	1,047,687,000
Indiana	443,173,000	481,471,000
Iowa	357,783,000	412,424,000
Kansas	335,251,000	*388,384,000
Kentucky	164,053,000	176,203,000
Louisiana	165,496,000	187,955,000
Maine	110,558,000	116,199,000
Maryland	191,788,000	188,930,000
Massachusetts	544,449,000	577,197,000
Michigan	745,063,000	821,534,000
Minnesota	401,131,000	441,914,000
Mississippi	99,227,000	115,224,000
Missouri	446,368,000	492,572,000
Montana	67,860,000	75,645,000
Nebraska	199,652,000	228,200,000
Nevada	23,029,000	23,544,000
New Hampshire	65,783,000	68,305,000
New Jersey	698,791,000	711,128,000
New Mexico	46,760,000	52,222,000
New York	1,537,606,000	1,625,571,000
North Carolina	236,945,000	255,691,000
North Dakota	97,919,000	114,789,000
Ohio	894,422,000	984,309,000
Oklahoma	265,128,000	300,357,000
Oregon	158,373,000	174,550,000
Pennsylvania	1,041,061,000	1,062,602,000
Rhode Island	101,036,000	98,157,000
South Carolina	104,361,000	121,239,000
South Dakota	110,709,000	134,514,000
Tennessee	180,722,000	214,369,000
Texas	749,050,000	826,107,000
Utah	56,081,000	61,175,000
Vermont	46,876,000	49,151,000
Virginia	229,483,000	244,151,000
Washington	245,567,000	272,608,000
West Virginia	128,848,000	143,981,000
Wisconsin	408,667,000	455,649,000
Wyoming	35,375,000	39,477,000
Total	15,455,975,000	16,621,104,000
Daily average	42,229,000	45,537,000
Change from previous year:		
Total decrease	1,165,129,000	.....
Percentage decrease in daily average	—7.26%	.....

*Revised.

TUBE FAILURE CAUSES DEATH

Completion of the new cracking unit under construction at the Pampa plant of the Petroleum Refractionating Co. will be delayed several weeks as the result of a tube failure and fire March 5 that killed two operators. The unit was operating under test conditions. This will not interfere with the operation of the balance of the plant.

CHANGE IN FREIGHT RATE

Effective not later than April 1 distillate, for freight rate purposes, will be taken out of the gasoline classification, provided it is such a distillate as is billed "unfit for illuminating purposes." This means that on and after March 15, distillate for heating purposes will be shipped at the freight rate applicable to fuel oil.

Indiana Standard Continues to Accept Checks and Extend Credit in Sales

CHICAGO, Mar. 6.—The following statement has been issued by Standard Oil Co. (Indiana), outlining the company's policy in meeting the emergency caused by bank holidays: "We believe that the present situation will prove to be only temporary. Looking forward to steps which will doubtless be taken by the national government to meet the emergency and to restore confidence in the fundamental soundness of the banking system and credit structure of the country, we consider it necessary to plan at present only for the immediate future.

"In our dealings with customers we shall continue as usual accepting both cash and checks in return for petroleum products and extending credit in the usual circumstances and to the usual extent.

"In meeting our payrolls we plan to use cash accumulated at our stations to cash employes' checks. In meeting other obligations we shall tender our checks in the usual manner.

"We trust that there will be a speedy resumption of normal banking functions."

President Henry M. Dawes, Pure Oil Co., issued the following statement:

"The exercise of reasonable ingenuity will, I think, make it entirely possible for the oil companies to make the financial adjustment necessary to meet the very unusual banking situation and to do so without serious inconvenience to its customers and employes. Its duration will not be long and its end will probably mark definite stabilization. The sanity with which the public generally is meeting the first shock of this readjustment will greatly mitigate its severity."

Shell Supplying Products From Canadian Refineries

The Shell interests, which is one of the large distributors of petroleum products in Canada, has completed the operating personnel of two new refineries which will supply the Shell stations in the future. The new plant at Burnaby (Vancouver), British Columbia, is now operating. The plant at Montreal, Quebec, is practically completed and will start operating in the near future.

The Burnaby plant was built under the direction of the Shell company, with headquarters at San Francisco and its operations will be directed by the California company. C. M. Dean has been appointed plant superintendent. The refinery facilities at present are confined to crude oil topping. The rated crude oil capacity is 3,500 bbls. daily. The crude will be obtained from the California and South American properties of the Shell companies. The plant's products will be distributed in the western part of Canada.

The Montreal refinery is owned and will be operated by the Shell Oil Co. of Canada, Ltd., with main offices in Toronto. This refinery is the combination skimming and cracking type and also has a rated crude oil capacity of 3,500 bbls. daily. The cracking facilities are of the Dubbs type. P. M. Fowlie is president and general manager of the Shell of Canada. F. S. Clulow has been appointed superintendent of the refinery, H. G. Pittsway refinery engineer and D. M. Morrison assistant superintendent. J. A. Adamson is manager of tank car sales and H. W. Wilson manager of bulk and service stations. Crude oil supplies for this refinery will be obtained from the Shell producing properties in United States and South America.

MAY IMPROVE ARUBA PLANT

NEW YORK, Mar. 6.—Early announcement of plans for improvement at the Aruba, Dutch West Indies, refinery of Pan American Foreign Corp. (Standard Oil Co. of New Jersey) is looked for. The Aruba plant, with daily capacity of between 110,000 and 125,000 bbls. daily, is among the largest in the world with topping and cracking equipment.

When originally built several years ago, a large part of its output was shipped to the United States in the form of bunker fuel oil, but imports of this oil are no longer economically feasible on a large scale, owing to the import duty of 21 cents per barrel on this oil.

Panhandle Company Leases Refinery at Kings Mills

WICHITA FALLS, Tex., Mar. 6.—The Panhandle Refining Co. of this city has leased the refinery of the King Royalty Co. located at Kings Mills in Gray County of the Texas Panhandle. The plant was formerly operated by the Dixon Creek Oil & Refining Co. and became the property of the King Royalty Co. when the latter purchased the Dixon Creek properties last fall.

The refinery has a topping capacity of approximately 2,500 bbls. daily and will be operated on a basis of 2,000 bbls. daily by the Panhandle company. The Panhandle company for the past 15 years has operated its refinery located in this city.

GILLILAND PLANT COMPLETED

The new skimming plant of the Gilliland Oil Co., located near Gladewater in East Texas, is nearing completion and will start operating within 10 days. The new plant will have a capacity of 2,000 bbls. daily. The plant was designed for permanent operation. The owners expect to install a cracking plant later.

The Gilliland company is headed by John W. Gilliland, who is widely known in the Mid-Continent as a producer and refiner. Mike Liles is secretary of the company and O. H. Berryman is plant superintendent.

START IOWA PARK PLANT

George Golden is to reopen the Iowa Park Producing & Refining Co.'s 2,500-bbl. skimming and cracking plant near Iowa Park in Wichita County, Texas. He also owns the Archer Refining Co. plant at Megargel in Archer County.

START COSDEN PLANT

FORT WORTH, Tex., Mar. 7.—The daily allowable in the Howard-Glasscock Pool has been increased from 14,000 to 16,000 bbls. Cosden Oil Co. has raised its nominations from 4,500 to 5,500 bbls. and full operations of the plant are scheduled to be resumed this month.

NEW RUNNELS COUNTY PLANT

A small skimming plant is now under construction in Runnels County, Texas, to use local crude. The plant will operate under the name of the Golden Petroleum Co., organized by M. M. McCabe and associates.

Name Moore Receiver for Deep Rock Oil Properties

Ed H. Moore, former president of the Independent Oil & Gas Co. and widely known independent oil operator, last week was appointed receiver for the Deep Rock Oil Corp. by District Judge Thurman Hurst, at Tulsa. The corporation for several years has been engaged in all branches of the oil industry. Its properties include crude oil production and pipe line facilities with a 10,000-bbl. modern refinery at Cushing, Okla. The corporation has distributing facilities in several middle western states and maintains its general sales office in Chicago.

The petition of receivership was filed by John L. Gray, who has been the executive head of the corporation and L. B. Riddle, who was also an officer of the corporation. The original action brought last week in a Tulsa court which was later amended asked for receivership of certain affiliated companies of the Deep Rock. The immediate cause of the receivership was the fact that $10,000,000 in notes became due March 1. Waivers until March 1, 1937, have been obtained on $8,000,000 of these obligations.

The previous action had also named Deep Rock Oil & Refining Co., an Oklahoma corporation which rents oil properties and refinery to the other firm of like name, the Standard Gas & Electric Co., a $1,000,000,000 holding corporation for utility firms, and Oklahoma Gas & Electric Co., of Oklahoma City, a Standard subsidiary valued at $19,190,000. This action asked an $8,756,719.50 judgment against these three corporations.

The simpler amended bill simply asks that the receiver be named and empowered to institute such suits as in his judgment seem necessary.

The original bill alleges that Standard controls 98 per cent of the common stock of the Deep Rock Oil Corp. and has dictated its policies for years. Preferred stock has been sold to the public.

It is charged that, in 1921, Deep Rock corporation's directorate contracted with H. M. Byllesby Engineering & Management Corp., wholly owned by Standard, to pay $200,000 per year for management direction. Byllesby has received $1,167,034.83 "for which it rendered no substantial service," the petition alleges.

SINCLAIR ADDING STORAGE

The Sinclair Refining Co. has placed contracts with the Chicago Bridge & Iron Works covering the furnishing of all materials and the construction of four 80,000-bbl. storage tanks for its refinery at Houston, Tex., all to be equipped with Wiggins pontoon floating roofs.

The company also has placed a contract with the Raymond Concrete Pipe Co. for pipe foundations for the four tanks at the Marcus Hook refinery, involving the expenditure of approximately $100,000. More than 20,000 bags of cement, about 5,000 cubic yards of other concrete materials and 100 tons of reinforcing steel will be used to complete the job, which will require about 60 days.

PROPOSE KANSAS REFINERY

A new refinery is proposed for Holyrood, Ellsworth County, Kansas. The Western Kansas Refining Co., with Henry Rosenthal, of Wichita, president, has purchased 10 acres of land in Section 10-17-10w, Ellsworth County, on which they plan to erect the refinery. The oil to be run will be produced in the Stratman Pool, in Section 1-17-10w. The wells in this pool are now shut awaiting a pipe line outlet. The Stratman area has a potential of 10,657 bbls.

NATURAL GASOLINE MANUFACTURE

California Natural Gasoline Stocks Are Reduced in January

The daily average natural gasoline production in California decreased from 34,626 bbls. in December to 34,059 bbls. in January, while both refinery utilization and shipments increased, so that stocks were reduced 3,255 bbls. daily in contrast to an increase of 2,479 bbls. daily in December. The daily average refinery utilization increased 1,775 bbls. and amounted to 28,910 bbls., and daily average shipments increased 3,031 bbls. and amounted to 5,845 bbls., principally due to the resumption of Atlantic foreign shipments. Stocks of natural gasoline at the end of January were 2,313,303 bbls., a total decrease of 100,927 bbls. The daily average production of liquefied gases decreased slightly while sales decreased from 433 bbls. daily to 378 bbls.

Following are data prepared by the California division of the Bureau of Mines:

CALIFORNIA NATURAL GASOLINE STATISTICS FOR JANUARY AND DECEMBER
(Daily average in barrels)

	Natural gasoline—January	Natural gasoline—December
Supply		
Total production	34,479	35,052
Stock trans. (deliv.) receipts—net	(229)	(61)
Total	34,250	34,991
Deduct refinery requirements:		
Run to stills	3,789	3,229
Blended	25,121	23,836
Total	28,910	27,135
Gains (losses) unaccounted for—net	(2,372)	(2,129)
Net supply available to market	2,968	5,727
Demand		
Domestic consumption	378	433
Off-shore shipments:		
Alaska and Hawaii		1
Pacific foreign exports		466
Atlantic foreign exports	3,239	
Intercoastal shipments	2,606	2,340
Total market demand	6,223	3,248
Surplus or (deficit)	(3,255)	2,479
Stocks—Last Day of Period		
Inside Pac. Coast Terr., last day	2,313,303	2,414,230
Decrease during period	100,927	

OPERATING DATA

Number of plants operating	104
Daily capacity, thous. cubic feet	2,576,475

PRODUCTION BY FIELDS

	Gas treated (thousand cu. ft.)	Natural gasoline produced (gallons)
Fullerton and Whittier	479,809	1,156,867
Midway	1,601,533	2,464,270
Huntington Beach	532,913	1,419,062
Kettleman Hills	11,294,227	13,586,232
Long Beach	3,088,214	7,362,501
Richfield	354,384	406,099
Santa Fe Springs	4,873,847	7,191,571
Seal Beach	480,070	811,128
Ventura Avenue	3,595,841	3,647,502
All other fields	4,296,129	6,299,519
Total	30,596,967	44,344,751

PRODUCTION BY METHODS

Type of plant—	Gas treated M.C.F.	Natural gasoline produced (gals.)	Gasoline recovery per M.C.F. gas treated
Oil absorption	30,436,830	44,210,920	1.453
Compressor	160,137	133,831	.836
Total	30,596,967	44,344,751	1.449
Finished gasoline produced at plants (bbls.)			186

STOCKS

	Gallons	Barrels
Natural gasoline held by plant operators	3,492,997	83,167
Natural gasoline held by refineries	93,665,712	2,230,136
Total	97,158,709	2,313,303

LIQUEFIED PETROLEUM GASES
(Barrels—daily average)

	January	December
Production	420	426
Sales	378	433

Operator May Determine Efficiency of Plant By Using a Convenient Chart

By W. A. STOVER

By using a rather simple chart a gasoline plant operator is in a position to ascertain any one of six interdependent operating factors regarding his plant if he knows the other five. The accompanying chart was designed to permit the practical use of the absorption factor in controlling the selectivity of the plant operation and is based on the theory of absorption set forth by Alois Kremser,[1] of the Standard Gasoline Co. of California as applied to the butane content of the gas being treated.

The particular butane factor to be used at a plant depends primarily upon the gasoline product desired, and upon the available butane in the rich gas. At a plant this butane factor can be ascertained only by trial, that is, by correlating the characteristics of the gasoline product with the butane factor until the right factor for the desired product is obtained.

Having found the right operating factor for a particular product it becomes necessary to maintain this value constant during changes in operating conditions, such as gas volume, operating pressure, oil temperature, etc.

The chart contains six variables, viz:

Butane factor.

Oil temperature, usually taken at absorber outlet.

Oil circulation, gallons per minute of lean oil.

Gas quantity in millions cubic feet per day entering absorber.

Absorber pressure, pounds per square inch absolute.

Specific gravity and molecular weight of the lean absorption oil.

When any five of these values are known the sixth may be readily obtained from the chart.

Construction of Chart

The chart is constructed from the formula:

$$P' \times F \times G = O$$

$$V \times P$$

P' = Vapor pressure of butane, pounds per square inch absolute at oil outlet temperature.

F = Butane factor.

G = Thous. of cubic feet of gas per day.

V = 20.00 for 32° A.P.I. oil M.W. 192
21.18 for 34° A.P.I. oil M.W. 182
22.15 for 36° A.P.I. oil M.W. 173
23.04 for 38° A.P.I. oil M.W. 164
24.10 for 40° A.P.I. oil M.W. 155
25.25 for 42° A.P.I. oil M.W. 146

P = Absorber pressure, pounds per square inch absolute.

O = Oil circulation, gallons per minute.

The values for V are obtained as follows:

$$V = \frac{3.156 \times 1440 \times S}{M}$$

Where: M = Molecular weight of absorption oil.
S = Specific gravity of absorption oil.

The vapor pressure of butane corresponding to the various temperatures shown on Scale T of the absorber control chart is shown on the vapor pressure chart for butane.

To use the chart requires no calcula-

(Continued on Page 30)

[1]The Oil and Gas Journal, May 22, 1930, page 146.

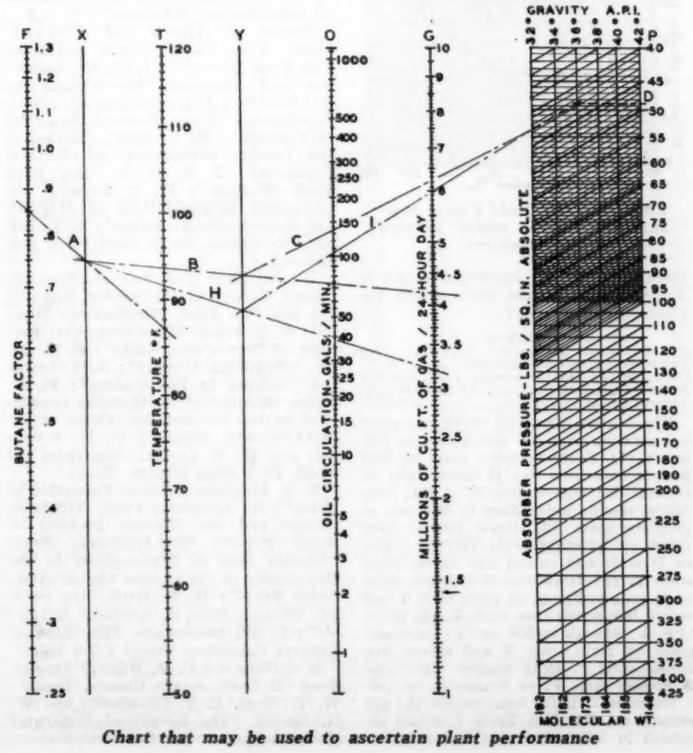


Chart that may be used to ascertain plant performance

Many Permits Are Sought to Process Wet Panhandle Gas

AMARILLO, Tex., Mar. 7.—At least 33 companies and individuals producing gas in the Panhandle will ask the Texas Railroad Commission in meeting here today to permit their processing gas through natural gasoline plants without limitation as to disposition of the residue. The commission has granted permission to Hagy, Harrington and Marsh to extract gasoline from gas produced from seven of the company's wells in the Panhandle and the new permits are sought as the result of this move. Only 25 per cent of the potential gas production from such wells could be processed according to previous rulings but the number of wells so affected would total 203 and they have a potential daily gas production of 2,682,929,000 feet, 25 per cent of which would approximate 669,130,000 feet daily.

If the manufacture of natural gasoline should become profitable through an increase in the market price, there is promise of considerable construction work there, but as yet the permanency of the permit to process it under the new provisions is questionable and once the gas is produced there is little incentive to build new plants to process it at the present market for the finished products.

The first efforts to be made, should the permits be granted, will be to extend the gathering system of existing plants to within reasonable limits and process this additional gas. Where this is not feasible some new plants may be built, but the course of the latter development necessarily will be in conformity with changes in the gasoline market.

Those seeking permits include the following: Alamosa Oil Co., Antelope Creek Oil & Gas Co., Antelope Oil & Gas Co., Carson-Lake Oil Co., Continental Oil Co., Combination Oil & Gas Co., T. H. Deal Oil & Gas Co., Dixon Creek Oil & Gas Co., Dorsyas Oil & Gas Co., Dyck Oil Co., A. B. Harris and S. C. Watts, F. C. Henderson, Inc., J. M. Huber Petroleum Co., Herrogan Oil Co., Jewel Oil & Gas Co., LeFors Petroleum Co., Lela Oil & Gas Co., C. M. Lyon, Magnolia Petroleum Co., Nabob Royalty Co., Panhandle Northern Oil Co., Phillips Petroleum Co., Shamrock Oil & Gas Co., Shell Petroleum Corp., Skyrocket Oil Co., Skelly Oil Co., Sinclair Prairie Oil Co., Sullivan and others, Timms Sutphen Oil Corp., Timms Fogarty Oil Corp., Twin Lake Oil Co., R. E. Underwood, Mrs. Donna Williams, J. O. Whittington, and S. & W. Oil Co.

Less Gasoline Oklahoma City, More in Panhandle

Natural gasoline production in the Oklahoma City Field will be cut to about 20 per cent of normal production as the result of closing down all wells except those making a large proportion of water. The normal production has approximated 220,000 gallons daily and the production under the shutdown will probably be reduced to somewhere near 44,000 gallons daily. The offsetting factor in the Mid-Continent from a market standpoint will be the larger production expected in the Panhandle area should the 33 permits to process gas, explained elsewhere on this page, be granted. Gasoline production there is expected to be increased by from 150,000 gallons daily to 170,000 gallons daily in the period from now until June 1 when all of the 203 gas wells effected will be connected to plants.

House Committee Makes Report on the Pipe Lines

(Continued from Page 14)

in which all or substantially all of the subsidiaries are owned directly by the parent company; the second, that in which the subsidiaries are predominantly clustered about two or more intermediate subsidiaries or nuclei; and, the third, that in which the subsidiaries are substantially all directly owned by a single intermediate company. The three types may be designated as the direct grouping, the nuclear and the sub-parent. Illustration of each is respectively provided by Pure Oil Co., Socony-Vacuum Corp., and Atlantic Refining Co.

Over 60 per cent of the companies in Group 1 reported that in 1931 they carried no outside oil in their gathering lines and that about 50 per cent of such companies made a similar report on the use of their trunk lines. Only 5.1 per cent of the gathering lines were reported to have carried in excess of 50 per cent of outside oil and only 10 per cent of the trunk lines. Passing over the intermediate group of companies to the third, a marked contrast is to be noted. As required by the circumstances of their operations, nearly all of the important lines in this group report a 100 per cent movement of "outside" oil.

Also of interest is the number of outside customers served. In the case of the gathering lines, the number in 1931 ranged from 1 to 11,813. Of the companies reporting, 9 had 1 or 2 outside customers, 6 from 3 to 9, 4 from 12 to 34, and 3 from 100 to approximately 400; the remaining five cases are as follows: Illinois Pipe Line, 2,696; South West Pennsylvania Pipe Lines, 3,019; National Transit Co., 5,794; Eureka Pipe Line Co., 8,539; and Buckeye Pipe Line Co., 11,813. The number of outside trunk line customers of these companies were respectively 5, 6, 20, 9, and 63, indicating that the oil had passed into relatively few hands before receiving trunk line movement. Four of these five companies, and, in fact, all except two of the companies having in excess of 34 customers fall in the group of independent pipe lines.

The ownership of storage facilities is a matter of interest to the smaller producing units of the oil industry, inasmuch as in the absence of facilities of their own and, where such is the case, of a right to use those of others, they are not able to hold their production for a more favorable price or to make as effective arrangements as otherwise for selling to refiners other than those taking the bulk of the production or setting the governing price in given fields.

Nearly 30 per cent of the companies engage exclusively in movements across state lines, three-fourths or more of the business of nearly another 20 per cent represents interestate movements, and about 23 per cent report no movements across state lines. Included in this report are eight California companies, whose lines or refineries are wholly in that state or wholly in Texas, but whose refined products move extensively in interstate and foreign commerce. Included among the 13.7 per cent of companies for which complete data are lacking are several, such as the Oklahoma, the Humble, and the Standard pipe lines, which are subsidiaries of Standard Oil Co. (New Jersey Corporation).

Return on Investment

The average return on investment in the period 1921-1931 was 14.49 per cent and on the net investment in the period 1923-1931, 25.43 per cent. In interpreting these figures consideration should be given to the fact that the investment includes large amounts applied from charges against operating expenses for depreciation and depletion, and also of reinvested earnings.

The ownership of crude oil pipe lines rests largely and that of gasoline pipe lines wholly with large or medium-sized integrated units of the oil industry. There is a further concentration of the larger part of the pipe lines in the hands of a relatively few of such integrated units only eight important pipe lines—the so-called northern and southern groups and the National Transit Co. having the unusual earmarks of common carriers. Their unique status, is, however, explained by the fact that they were separated from producing or other units of the oil industry by court action. They therefore are not exceptions to the well-recognized rule that pipe line facilities have developed as adjuncts of the oil industry, designed to serve the individual interest of the members of that industry.

With few exceptions, the pipe line companies state that there are no differences in their transportation charges as between various shippers receiving substantially the same service regardless of the quantity of oil offered. However, shippers generally must meet substantial minimum tender requirements, a fact which discourages use of the lines to transport the purchases of independent refiners. . . .

Speaking generally, the earnings of pipe line companies are high at the rates charged. It is urged that this fact provides an opportunity for the integrated groups which own the pipe lines to recoup from such earnings the losses they may sustain in other branches of the industry. Since the pipe lines are generally owned 100 per cent by the oil companies such a result could follow only (a) as to oil carried for outsiders, which generally is not extensive, or (b) if, as is generally the case, the pipe line rates are high in relation to the true cost of operation and if, as a further condition, the effect of such high rates is to depress the price paid the independent producer for his oil. The latter condition would be met only if were demonstrated that the price at the well is the refinery price less the cost of transportation and certain incidental costs. The forces determining refinery bids for crude petroleum are varied and changing and are exerted from both the side of consumer demand for refined products.

Determine Efficiency of Plant by Using Chart

(Continued from Page 29)

tions whatever, as all the variables are included in the scales. A few samples will make the procedure clear.

Example 1. Suppose, for instance, that a plant produces a suitable gasoline while

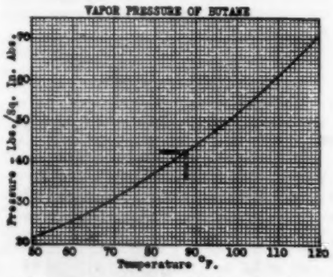


Chart showing Reid Vapor pressure of Butane under varying temperatures

operating under the conditions shown in Table 1, what butane factor would the plant be operating on?

TABLE 1

Oil circulation, gals./min.	139
Temp. of oil leaving absorber	87°F.
Cu. ft. of gas/day to absorber	4,200,000
Absorber pressure	48.5 lbs. absolute
Absorption oil	36°A.P.I.

The butane factor on which the plant is operating may be determined as follows: (1) Enter pressure scale at 48.5 pounds and draw line D horizontally to vertical line representing 36° A.P.I., then follow sloping guide lines to left side of pressure scale. (2) Draw line C from value on pressure scale through value on O scale and extend line across plain scale Y. (3) Draw line B through value on G scale and point on plain scale Y and extend line across plain scale X. (4) Draw line A through value on T scale and point on plain scale X and extend line across scale F. Read answer where line A crosses scale F, or butane factor .85.

Example 2. If for some reason the gas volume as shown in Table 1 should diminish to 3,200,000 cubic feet per day, other conditions remaining the same, what change in oil circulation would be necessary in order to maintain the characteristics of the gasoline product?

Knowing the operating factor to be .85, the change in oil circulation may be determined by first drawing line H from point on scale X to 3,200,000 on scale G, intersecting plain scale Y, then draw line I from point on scale Y to point on pressure scale and read answer where line I crosses scale O, which shows an oil circulation of 105 g.p.m.

Example 3. To find the gallons of oil to circulate per 1,000 cubic feet of gas for the following conditions:

Butane factor	.85
Oil outlet temperature	87°F.
Absorber pressure	48.5 abs.
Absorption oil	36° A.P.I.

The solution of this problem is the same as in example No. 2 except the value on scale G will be 1,440,000, indicated by arrow. The answer will be read on scale O as gallons per 1,000 cubic feet of gas instead of gallons per minute.

Note: Blueprinted copies of the absorber control chart with instructions, on 8½ by 11 sheets, may be obtained for a nominal sum, postpaid, by addressing G. S. Birch, Box 2021, Tulsa, Okla.

Preliminary Program for A.A.P.G. Annual Meeting

(Continued from Page 14)

eastern Utah"; A. A. Baker, C. H. Dane and J. B. Reeside, "The Pennsylvanian Salt Bearing Formation of Eastern Utah and Western Colorado"; Donald C. Barton, C. H. Ritz and M. Heckey, "The Gulf Coast Geosyncline"; Donald C. Barton, "Surface Fractures of South Texas"; Donald C. Barton, "Geophysical Survey of the Munich Tertiary Basin, Bavaria"; Don Danvers and Olin G. Bell, "Carolina-Texas and Laurel Fields"; M. N. Bramlette, "Origin of the Miocene Siliceous Rocks of California."

D. M. Collingwood and F. E. Heath, "A Study of Bottom Hole Pressures Within the East Texas Field"; A. R. Dennison, A. E. Oldham and J. W. Kisling, "Structure and Stratigraphy of the Kelsey Dome, Upshur County, Texas"; Robert H. Dott, "Structural History of the Arbuckle Mountains, Oklahoma"; J. Brian Eby, "Review of Developments in the Gulf Coast During the Recent Past"; Alva C. Ellisor, "The Jackson Formation of the Gulf Coast"; H. L. Griley, "Preliminary Discussion of the Triassic of Southwestern Oklahoma."

Marcus A. Hanna and Albert G. Wolf, "Texas and Louisiana Salt Dome Cap Rock Minerals"; J. Harlan Johnson and A. E. Brainerd, "The Mississippian of Colorado"; J. Harlan Johnson and A. E. Brainerd, "Upper Paleozoic Red Beds of Colorado"; H. V. Howe, "Review of the Tertiary Stratigraphy of Southern Louisiana"; J. S. Irwin, "Cut Bank Field, Montana"; W. P. Jenney, "Experimental Interpretations of Magnetic and Gravometric Anomalies"; S. A. Judson, "Overhangs on the Gulf Coast Salt Domes."

W. G. Kane and Guy B. Gierhart, "Areal Geology of the Eocene North of the Rio San Juan, Northeastern Mexico"; P. B. King, "Some Structural Features of Trans-Pecos, Texas"; F. H. Lahee, "Petroleum Geology"; A. I. Levorson, "Studies in Paleogeology"; H. D. Miser, "Relation of the Ouachita Geosyncline to the Oil and Gas Fields of the Mid-Continent Region"; P. H. O'Bannon and W. B. Carter, "Sugarland Oil Field, Fort Bend County, Texas."

F. B. Plummer, "Wilcox Formation of Texas"; W. Armstrong Price, "Origin of Caliche and the Reynosa Problem of South Texas"; W. Armstrong Price, "Possible Role of Diastrophism in the Topography of the Corpus Christi Area, South Texas"; R. D. Reed, "Oil Bearing Pliocene Beds of Southern California"; L. W. Stephenson, "The Zone of Exogyra Cancellata Traced 2,500 Miles."

L. P. Teas and C. M. Miller, "Raccoon Bend Oil Field, Austin County, Texas"; W. T. Thom, R. T. Chamberlin and W. H. Bucher, "The Results of Structural Research Work in the Beartooth-Bighorn Region"; P. D. Trask, "Preliminary Study of Source Beds of Four Oil Producing Regions, Santa Fe Springs, California, Salt Creek, Wyoming, Central Oklahoma, and East Texas"; P. D. Trask, "Preliminary Study of Source Beds in the Mesozoic Rocks on the West Side of Sacramento Valley, California."

H. R. Van Gilder and H. Rogers, "Geology of Potter and McKean Counties, Pennsylvania"; C. E. Van Ostrand, "Some Possible Application of Geothermics to Geology"; Paul Weaver, "Relation of Geophysics to Geology"; R. B. Whitehead, Kemp and Tash, "Experiments on Permeability"; and H. D. Wilde and F. H. Lahee, "The Value of Gas Conservation and Efficient Use of Natural Water Drive as Demonstrated by Laboratory Models."

W. Armstrong Price, "Geology of Natural Gas Fields of White Point, Saxet, and Edna, South Texas"; B. Coleman Renick, "Yegua, Jackson and Catahoula Formations From Fayette to Trinity County, Texas"; Alexander Deussen, "Producing Horizons of Texas Gulf Coast"; Fred P. Shayes, "Surface and Subsurface Relationships of Yegua, Jackson, and Frio Formations in Southwest Texas"; Sam H. Houston, Jr., "Deep Well Correlations Along Balcones Fault Zone"; Al Ferando, "Pettus Sand in Southwest Texas"; I. R. Sheldon, "Driscoll Ranch Pool."

George Edwin Dorsey, "Preservation of Oil During Erosion of Reservoir Rocks"; O. E. Meinzer, "Movements of Ground Water"; L. G. Snider, title not announced; John L. Rich, "Nature and Mechanics of Low-Angle Overthrusting as Illustrated by Cumberland Overthrust Block"; R. B. Weatherby, two papers on seismic work.

Among these papers are some which will probably be transferred from the general program to the programs of the geophysicists and the paleontologists.

Paleontological Papers

The papers scheduled tentatively for the program of the Society of Economic Paleontologists and Mineralogists include the following, listed by authors, alphabetically: John R. Ball, "Bainbridgia Typicalis, a New Genus of the Silurian Auloporidae"; C. L. Cooksey, "Significant Micro-Fauna From the Boggy Formation of Oklahoma"; G. M. Harris, "New Species of Foraminifera and Ostracods From the Duck Creek and Fort Worth of Southeastern Oklahoma"; R. W. Harris, "New Species of Fayetteville Ostracods From Washington County, Arkansas"; R. V. Hollingsworth, "Paleontological Notes Concerning the Savana Formation in the McAlester Quadrangle, Oklahoma"; H. V. Howe, "Apertural Characteristics of the Genus Hantkenina."

H. A. Ireland, "Insoluble Residues as a Criteria for Pre-Pennsylvanian Correlation in Oklahoma"; Dan J. Jones and J. Willis Stoval, "Notes on a New Occurrence of Petrodus"; J. Harlan Johnson, "The Geological History of Lime Secreting Algae"; J. Harlan Johnson, "Fossil Algae From the Carboniferous of Central Colorado"; William B. Kramer III, "Glansoceras, a New Carboniferous Actinoceroid"; F. B. Plummer, "Important Zone Fossils of the Tertiary and Their Identification"; Rudolph Ruedmann and Charles E. Decker, "The Graptolites of the Viola Limestone"; John S. Sandidge, "Foraminifera From the Jurassic of Montana"; H. B. Stenzel, "The Genus Buccitriton as Subsurface Guide Fossil"; and H. C. Vanderpool, "Lower Marine Miocene at Stratton Ridge, Brazoria County, Texas."

DEATH OF FRANK P. ZOCH

Funeral services were held at San Antonio, Tex., on Monday for Frank P. Zoch, southwestern oil operator, who died in a hospital in St. Louis after an operation. Mr. Zoch had been active in southwestern and West Texas and was well known throughout that territory. Mrs. Zoch is a sister of Mrs. E. B. Reeser, wife of the president of the Barnsdall Corp. and former president of the American Petroleum Institute.

Explains Problems of Gasoline-Alcohol Fuels

(Continued from Page 27)

proportions of blending material which cannot be produced in sufficient quantities in this country, or where the blended fuel is handled as a national monopoly, but in most cases the laws are either still under consideration or are not rigidly enforced.

I understand through companies importing gasoline into France that the public has declined to purchase the motor fuel containing alcohol and that this fuel is used only by government cars and Paris buses. The law requires that all importers purchase alcohol to the extent of 10 per cent of the gasoline imported under penalty of heavy fine. Because of their inability to sell the alcohol blended with gasoline the importers have refused to purchase the alcohol and refused to pay the fine, with the result that there is a bill before the chamber of deputies to extend the time of payment of these fines.

Considering the additional difficulties involved in large scale and the widespread market facilities existing in this country, the commercial distribution and use of alcohol motor fuel is only in the experimental stage.

If this manner of burning corn in the form of liquid fuel involved less loss than burning the whole ear in furnaces and boilers, its use for a limited period of time might be tolerated even on an experimental basis, but certainly not as a permanent policy, until these difficulties commonly experienced wherever alcohol is used as a fuel have been solved.

In my work at the University of Michigan I am concerned with fuels of all classes, both solids and liquids, and I find that this proposal to convert corn into alcohol before burning involves a greater financial loss to the farmer and taxpayer in general than if the corn was purchased and burned as such, even in the fields. The economics of this method are only too well known to this part of the country.

Taking the figures from the third progress report of the Iowa State College, the cost of 1 gallon of 95 per cent alcohol is about 25 cents when produced from corn delivered to the distilling plant at about 32 cents per bushel, and when by-products are sold back to the farmer for use as feed. This corresponds to a cost of about 30 cents per gallon of dehydrated alcohol, providing that such can be made without payment of patent royalty for use of the patented process of dehydration. This is necessary as it is impossible to use other than dehydrated alcohol in motor fuel blending unless a blending agent be added at a greater cost than the cost of dehydration. Furthermore, the Butyl alcohol which has been proposed as a blending agent can be produced from corn only with much smaller yield and by a process patented and controlled by one company.

The cost of gasoline in the refinery or tank car in Iowa is at present about 5 cents. This means that the cost of the alcohol blend will be at least 2½ cents greater than that of undiluted gasoline, neglecting blending and increased distribution costs. Since the farmer uses about one-half of the 350,000,000 gallons of motor fuel consumed annually in the State of Iowa, and the proposed bill exempts no fuel used in any internal combustion engine, this means the farmer is out of pocket $4,375,000 cash, and the whole state $8,750,000 cash due to increased cost of motor fuel, for the purpose of burning 14,000,000 bushels of corn delivered to the distiller at 32 cents per bushel, or purchased from the farmer at a net return of about 20 cents. These sums taken from the taxpayers and farmers will serve simply to pay a profit to the engineering firms which build, and the distillers who operate, the new alcohol plants.

Stripper Well Producers to Combat Legislation

(Continued from Page 10)

assessed when the posted price of oil is below $1 per barrel. The bill was amended in committee and a graduated minimum tax substituted for the 3-cent flat minimum tax, as follows: For oil of 39 gravity or above, 3 cents; 38 gravity, 2.9 cents; 37 gravity, 2.8 cents; 36 gravity, 2.7 cents; 35 gravity, 2.6 cents; 34 gravity, 2.5 cents; 33 gravity, 2.4 cents; 32 gravity, 2.3 cents; 31 gravity, 2.2 cents; 30 gravity, 2.1 cents, and 30 gravity and below, 2 cents.

Most of the stripper wells in the state produce oil of about 32 gravity and the owners of these will find a small measure of relief in this amendment, even though the bill is oppressive as amended. Under the old bill now in force, 100 bbls. of 32 gravity oil bringing the current price of 36 cents per barrel or $36 per 100 bbls. bears a gross production tax of 3 per cent, or $1.08. Under the 3 cents-per-barrel provision it would have borne a tax of $3, but under the amended provision it would bear a tax of $2.30.

There is no doubt that at the present price schedule for crude oil in Oklahoma producers of 32 gravity crude in the stripper areas are operating their wells at a considerable loss. To more than double the gross production tax at such a time will mean that the producer will pay the state a fine rather than a tax. The state will take away from the producer money he cannot realize from his oil production, and this will continue until the producer is forced out of business or until the price of 32 gravity oil is high enough to get the producer out of the red. The bill shrewdly provides that the graduated minimum tax be discontinued for the 3 per cent tax when the sale price of oil increases so that the 3 per cent tax yields a greater sum to the state than the minimum graduated tax..

The amended bill also provides that the minimum tax on natural gas and casinghead gas shall be one-half of 1 cent on each thousand cubic feet of such natural gas and for casinghead gas which shall be measured and metered under rules and regulations prescribed by the Oklahoma Tax Commission in accordance with the prevailing standards used in gas measurements.

In addition the bill exacts an ad valorem tax on all the equipment and material on the lease not actually in wells, which is a new exaction on the part of the state.

Friday night's meeting was called to order by Bruce Martin of Tulsa, a member of the Northeastern Oklahoma Stripper Well Association, who introduced the president, H. G. Ellis, of Bartlesville, Okla., general manager of the Wiser Oil Co., and W. W. Warner, of Warner & Caldwell, secretary and treasurer. Both officials spoke of the importance of organization in combating the proposed excessive tax legislation. At the conclusion of the meeting most of those present enrolled in the organization.

The principal speaker of the evening was Clarel B. Mapes, of the Mid-Continent Oil and Gas Association, who helped make the fight before the house committee on taxation at Oklahoma City.

NATIONAL SCOUTS ASSOCIATION

HOUSTON, Tex., Mar. 6.—San Antonio has been selected as the meeting place for the 1933 annual convention of the National Oil Scouts Association at a meeting of the executive committee held in Houston the past week. The convention will be held May 15-16 and will have headquarters in the Plaza Hotel.

ANNUAL CALIFORNIA BANQUET

LOS ANGELES, Calif., Mar. 6.—The twenty-sixth annual banquet of the California Oil and Gas Association will be held March 15 in the Sala d'Oro of the Biltmore Hotel, Los Angeles. A feature of the affair this year will be the absence of set speeches, emphasis being placed instead on entertainment.

Crude Oil Prices

(Continued from Page 25)

Fort Collins, Wellington and Greasewood, Colo., are on contract basis.

Florence (Jan. 18, 1933)	.32
Dutton Creek, Wyo. (Jan. 18, 1933)	.34
Rock Creek, Wyo. (Jan. 24, 1933)	.46
Frannie, light (Jan. 18, 1933)	.21
Frannie, heavy (Jan. 18, 1933)	.20
Salt Creek	
See Stanolind Mid-Continent price schedule	
LaBarge .....Mid-Continent gravity scale	
Big Muddy (Jan. 18, 1933)*	.40
Grass Creek (Jan. 18, 1933)	.42
Grass Creek heavy (Dec. 15, 1932)	.45
Elk Basin, light (Jan. 18, 1933)	.62
Lance Creek (Dec. 16, 1932)	.92
Poison Spider (Mar. 5, 1931)	.70
Hudson (June 2, 1931)	.65
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 22, 1930)	1.10
Osage (Jan. 18, 1933)	.52
Lost Soldier (Apr. 12, 1932)	.50
Hamilton Dome (Dec. 16, 1932)	.25
Torchlight (Jan. 18, 1933)	.62
Greybull (Jan. 18, 1932)	.62
Cat Creek (Jan. 18, 1933)	.62
Pondera (Nov. 7, 1932)	.50
Sunburst, Mont. (Nov. 7, 1932)	.75
Hogback, N. Mex. (Jan. 18, 1933)	.65
Lea County, N. Mex. (Jan. 20, 1933)	.30
Maljamar (Jan. 20, 1933)	.25
Artesia-Jackson (Jan. 20, 1933)	.30

Note—Salt Creek, Cat Creek, Dry Creek, Dallas-Derby, Hudson, Greybull, Hogback, and Iles by Stanolind Oil & Gas Co. and remainder by Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective January 20, posted by Humble Oil & Refining Co. Fort Collins, Wellington, Orchard, Florence, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro

*Posted by Continental Oil Co.

Middle Western States

OHIO OIL CO.
(Effective January 18, 1933)

Lima (Jan. 10, 1933)	$ .70
Wooster	.70
Illinois	.62
Indiana	.40
Princeton	.62
Plymouth	Shut in
Western Kentucky	.57
Midland, Mich. (Dec. 31, 1932)*	.95
Somerset, Ky. (Jan. 19, 1933)	.45
Muskegon, Mich. (Jan. 18)	See note

*Posted by Pure Oil Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted price. Muskegon posted by Naph Sol Refining Co. and Old Dutch Refining Co.: Below 29 degrees, 51 cents, with 2 cents added for each degree upward to 40 and above at 75 cents. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and delivered through own pipe line.

Mexico

Panuco*	$ .44

*F.o.b. ship, based on January transactions and exclusive of production and export taxes and bar dues.

Canada

Ontario (Jan. 18, 1933):	
Petrolia*	$1.75
Oil Springs*	1.82
Alberta (Apr. 22, 1932):	
Turner Valley†:	
Crude oil 40-44.9	1.56
Crude oil 45-45.9	2.18
Crude oil 50 and above	2.80
Crude naphtha	3.32
Discolored naphtha	1.04

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective March 5, 1933)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Long Beach	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canyon	Athens-Rosecrans	Torrance	Richfield	Whittier	Montebello	LaHabra, Coyote	Santa Fe Springs	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga
14-14.9	$.55	$.55	$.55	$.55	$.55	$.55	....	$.55	$.55	$.55	$.55	$.55	....	$.49	$.49	$.49
15-15.9	.55	.55	.55	.55	.55	.55	....	.55	.55	.55	.55	.55	....	.49	.49	.49
16-16.9	.55	.55	.55	.55	.55	.55	....	.55	.55	.55	.55	.55	....	.49	.49	.49
17-17.9	.55	.55	.58	.58	.58	.58	....	.57	.56	.57	.55	.55	....	.49	.50	.49
18-18.9	.57	.56	.61	.61	.60	.61	....	.59	.58	.59	.55	.57	....	.49	.52	.49
19-19.9	.59	.57	.63	.64	.62	.64	....	.61	.61	.61	.55	.59	....	.49	.54	.49
20-20.9	.61	.59	.64	.67	.64	.66	....	.62	.63	.63	.55	.61	....	.52	.56	.49
21-21.9	.63	.62	.66	.69	.66	.68	....	.64	.66	.65	.55	.63	$.57	.55	.58	.51
22-22.9	.65	.64	.68	.71	.69	.70	....	.66	.68	.67	.57	.65	.59	.57	.60	.53
23-23.9	.67	.67	.70	.73	.71	.72	....	.68	.70	.69	.60	.67	.62	.60	.62	.55
24-24.9	.69	.69	.72	.75	.73	.73	$.65	.70	.73	.71	.62	.69	.64	.63	.63	.57
25-25.9	.71	.72	.74	....	.75	.75	.68	.72	.75	....	.65	.71	.66	.66	.65	.59
26-26.9	.73	.74	.75	....	.77	.77	.70	.73	.77	....	.68	.72	.69	.68	.67	....
27-27.9	.75	.76	.77	....	....	.79	.73	....	.80	....	....	.74	.71	.71	.69	....
28-28.9	.77	.79	.79	....	....	.81	.75	....	.82	....	....	.76	.73	.74	.71	....
29-29.9	.79	.81	.81	....	....	....	.78	....	.84	....	....	.78	.76	.76	.73	....
30-30.9	.81	.84	.83	....	....	....	.81	....	....	....	....	.80	.78	.79	.75	....
31-31.9	....	....	....	....	....	....	.83	....	....	....	....	.82	.80	.82	....	....
32-32.9	....	....	....	....	....	....	.86	....	....	....	....	.84	.83	.85	....	....
33-33.9	....	....	....	....	....	....	86	....	....	....	....	.86	.85	.87	....	....
34-34.9	....	....	....	....	....	....	86	....	....	....	....	.88	.87	....	....	....
35-35.9	....	....	....	....	....	....	.86	....	....	....	....	....	.90	....	....	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	....	.92	....	....	....
37-37.9	....	....	....	....	....	....	....	....	....	....	....	....	.94	....	....	....
38-38.9	....	....	....	....	....	....	....	....	....	....	....	....	.96	....	....	....
39 and over	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

The Union Oil Co., General Petroleum Co. and the Associated Oil Co. reduced prices in all fields in which they purchase, their prices being the same as those of the Standard Oil Co. of California for crudes of the same gravities, in the same fields. Their prices were also effective March 6.

Santa Paula—Union Oil Co., effective March 5: 14 to 19.9 degrees, 55 cents; 1 cent added for each degree upward to 25-25.9 inclusive at 61 cents; 26-26.9, 63 cents; with 2 cents added for each degree upward to 30-30.9 degrees, at 71 cents.

Orcutt—Union Oil Co., effective March 5: 16 to 19.9 degrees, 49 cents; 20-20.9 degrees, 52 cents; 21-21.9 degrees, 55 cents; 22-22.9 degrees, 57 cents; 23-23.9 degrees, 60 cents; 24-24.9 degrees, 63 cents; 25-25.9 degrees, 66 cents; 26-26.9 degrees, 68 cents.

Elwood—Prices f.o.b. ship—Standard Oil Co. of California, effective March 5, 1933: 33-33.9 degrees, 83 cents; 34-34.9, 85 cents; 35-35.9, 87 cents; 36-36.9, 89 cents; 37-37.9, 91 cents.

Kettleman Hills—Standard Oil Co. of California, effective March 5, 1933: 33-33.9 degrees, 66 cents; 34-34.9, 68 cents; 35-35.9, 70 cents; 36-36.9, 72 cents; 37-37.9, 74 cents; 38-38.9, 76 cents; 39-39.9, 78 cents. The Union Oil Co., effective June 26, 1932, posted 33-33.9 gravity oil at 91 cents; 34-34.9 degrees, 93 cents; 35-35.9 degrees, 95 cents; 36-36.9 degrees, 97 cents; 37-37.9 degrees, 99 cents; 38-38.9 degrees, $1.01; 39 degrees and over, $1.03. Associated Oil Co. and General Petroleum Co. adopted same price schedule on same day.

Newhall, McKittrick and Kern River—Standard Oil Co. of California, 55 cents for all grades, effective March 5, 1933.

Wheeler Ridge—Standard Oil Co. of California, effective March 5, 1933: 14 to 20.9 degrees, 49 cents; 21-21.9 degrees, 50 cents; 22-22.9 degrees, 52 cents; 23-23.9 degrees, 54 cents; 24-24.9 degrees, 56 cents; 25-25.9 degrees, 58 cents.

James Crawford, Veteran Oil and Gas Man, Is Dead

OIL CITY, Pa., Mar. 7.—Funeral services were held today for James Burton Crawford, 77, pioneer oil and gas operator, who died here Sunday, following an illness of two months. Mr. Crawford was born in Emlenton, Pa., attended Eastman Business College, Poughkeepsie, N. Y., and at the age of 21 entered the oil business in Emlenton. He operated later in the Bradford Field and in 1883 came to this city as an accountant for the Oil City Fuel Supply Co. In 1903 he was made treasurer of the company. Later he became vice president and general manager of the United Natural Gas Co., and in 1915 he was named president, a position he held until his retirement on January 1, 1917. Since that time he had devoted his attention to private oil and gas interests.

Mr. Crawford was instrumental in organizing the Ohio Fuel Supply Co., Tropical Oil Co., Lone Star Gas Co., and the Western Public Service Co. During his career he held official positions in the Ohio Fuel Supply Co., Ohio Fuel Oil Co., Pennsylvania Gas Co., Pennsylvania Fuel Supply Co., Iroquois Gas Co. and the Provincial Natural Gas Co. of Ontario. He was a director of the Oil City National Bank and was active in civic projects. He was a trustee of the First Presbyterian Church and a thirty-second degree Mason. Interment, following the funeral services today, was in Emlenton.

Late Fields

KANSAS

Skelly Oil Co.'s No. 1 Cole, C SE NW, Section 4-26-8w, Reno County, found the Wilcox sand at 4,215-40 feet, where water rose 2,000 feet in the hole. It was drilling deeper to the Siliceous lime.

McBride, Inc.'s No. 4 in the SW cor. NW SW, Section 20-23-4w, Reno County, found a showing of oil and water in the chat at 3,191-3,218 feet. It was drilling deeper at 3,250 feet.

Carter Oil Co. and Frank Hollow's No. 1 Schmidt, Section 17-22-3w, a wildcat about a mile north of production in the Hollow Pool, in Harvey County, found the Hunton lime at 3,438-55 feet where oil rose 2,800 feet in the hole. It extends Hunton lime production about 1 mile north.

Central Commercial Oil Co.'s No. 2 King, in Section 20-13-21w, Trego County, was drilling at 2,251 feet. The well found the bottom of the salt formation at 2,195 feet, which is logging 19 feet higher on this formation than the No. 1 King, which was the discovery well in this area.

OKLAHOMA

Greater Seminole area was extended northerly by a wildcat well that started flowing at the rate of 100 bbls. an hour. Carter Oil Co., Gypsy Oil Co. and Sinclair Prairie Oil Co.'s No. 1 Keokuk, C N half NW NE Section 2-10-6, Seminole County, flowed 1,557 bbls. of oil the first 17 hours from what is said to be the Misener sand at 4,090-4,106 feet. This well is 5 miles from any other production in the area. It lies north of the Searight Pool. Production in the Searight Pool is found in the Hunton lime and Wilcox sand. The nearest Misener sand production to the new well is found in the Maud Pool, in Township 8-5, Pottawatomie County. The companies owning the well control about 5,000 acres of leases surrounding it.

Sovereign Oil Co.'s No. 1 Coker, SW cor. SE NE Section 2-8-5, found oil in the Wilcox sand at 4,255-90 feet. The oil rose 100 feet in the hole.

The Gypsy Oil Co.'s No. 1, in the SE cor. NW Section 25-6-4, in the West Konawa Pool, in Pottawatomie County, found a hole full of oil in Simpson dolomite from 3,338-3,445 feet. Tankage is being erected.

Boettcher Oil Co. and Blackwell Oil & Gas Co.'s No. 2 Jacobs, SE cor. Section 9-7-8, in the West Holdenville Pool, Hughes County, flowed 500 bbls. of oil from the Booch sand at 2,896-2,922 feet.

Phillips Petroleum Co.'s No. 2 Jacobs, SE cor. NE NE Section 16-7-8, West Holdenville Pool, found the Booch sand at 2,859-2,917 feet with a showing of oil. The casing was cemented and it is shut down waiting for the cement to set.

G. Manahan and others' No. 1 Harjo, NW cor. SE NW Section 29-7-8, in the West Holdenville Pool, found the Booch sand from 2,876-90 feet, where it was showing oil and gas. The casing is being landed at 2,882 feet.

CALIFORNIA

LOS ANGELES, Calif., Mar. 6.—Ohio Oil Co. has finished No. 1 Bloemer in the North Belridge Field, flowing 1,200 bbls. of exceptionally clean 33 gravity oil and 1,000,000 feet of gas daily from 8,525 feet. This is the second well finished in the deep Wagonwheel zone to date.

FAVORS LARGER ALLOWABLE

FORT WORTH, Tex., Mar. 7.—Lon Smith, railroad commissioner, has announced that he is in favor of a larger per well allowable for East Texas wells having a minimum allowance of 40 bbls., which is the marginal well limit, with an additional allowable to be prorated in regard to position on structure, bottom hole pressure thickness and permeability of sand. This announcement follows as a result of many thousands of barrels being produced above the present field allowable of 290,000 bbls.

CICERO I. MURRAY CITED

A citation has been issued by the District Court, Oklahoma City, on the application of the Rio Neches Oil Co. asking that Cicero I. Murray show cause why he cannot be held in contempt of court for shutting in the company's No. 1 Armour in the Oklahoma City Field. Hearing has been set for March 13.

The action of the court is believed to have grown out of the recent State Supreme Court decision forbidding the use of military to shut in a well without first giving the producer a hearing.

East Texas Crude Production and Shipments

Many oil men in close touch with conditions in East Texas state the average daily excess production there is about 150,000 barrels. The following reports, the first compiled by staff men of The Oil and Gas Journal and the second from the Texas Railroad Commission, give reported figures.

Figures for Week Ending February 27

Production

	Barrels
Lathrop	114,975
Kilgore	93,697
Joiner	95,745
Total	304,417

Shipments

Main pipe lines	318,966
Local refineries	46,466
Tank cars	39,680
Total	395,112
Reported production	304,417
Excess shipments	90,695

Railroad Commission Report

AUSTIN, Tex., Mar. 4.—The Texas Railroad Commission's daily report of main line pipe line gauging in the East Texas Field for the 24-hour period ending 7 a.m., March 4, follows:

Stock on hand, 7 a.m., March 3		1,770,399
Receipts, 24-hour period		394,997
Deliveries out of field, for period		340,892
Stock on hand, 7 a.m., March 4		1,772,471
Deliveries for period	340,892	
Tank car barrels (151 cars)	34,066	
Total		374,958
Estimated barrels, refineries		23,000
Total actual and estimated leaving field		397,958
Pipe line storage increase		2,070
Total deliveries plus storage increase		400,028

Lower Crude Prices Posted by Companies in California

(Continued from Page 9)

ity Mid-Continent, North Texas and East Texas crude oils with proper differentials for gravities above and below, and such prices in other fields in relation to the above as it is willing to pay.

"The Texas Company's policy as to prices thereafter will depend upon conditions existing at the time. If oil is being offered on and after April 10, 1933, at less than our postings we may consider it necessary in our interest thereafter to buy at the lowest prevailing prices at which crude is offered.

"After making due allowance for estimate of probable imports and exports and a possible 10 per cent decrease in domestic gasoline consumption, and allowing for a desirable and probably inevitable withdrawal from storage by the industry throughout 1933 because of financial stress, if for no other reason, it is our opinion that the average daily requirements of crude production in the United States will be 1,985,348 bbls. and recommend this until some better or possibly more accurate estimate is determined. This could be accepted as a fair and desirable estimate of market requirements, and it is desirable that the states in whatever way they properly can should determine among themselves the allowable for the various states, and that each state should determine proper allocation of different pools within said states.

"In the meantime, if the conservation authorities in Texas and Oklahoma, or elsewhere, would accept the co-operation of competent committees representing the oil industry in endeavoring to arrive at the most equitable basis for allowable and of a committee of counsel from the industry to assist in drafting the necessary conservation laws and commission orders that may better stand the courts' test as to validity, I will immediately endeavor to get the industry to form such committee with the hope that we may have fuller and more effective co-operation between the industry and the states' authorities in acting in the joint interest of both.

"The Texas Company has no desire, nor do I believe the buyers generally of crude have any desire to buy crude oil at prices that are ruinous to the producers of crude. If under existing conditions it is not possible for all industries to get on a better and more sound basis, certainly it is desirable that any one industry should do whatever it possibly can in a lawful way to contribute to an improved condition."

The Texas Company's New Prices

On Monday, March 6, The Texas Company posted prices on the Gulf Coast as follows: Below 22 degrees, 45 cents, with 1 cent added for each degree upward to 40 degrees and above, at 64 cents. The new prices are all 10 cents below The Texas Company's schedule made effective on January 19, but are yet a little higher than the Humble Oil & Refining Co. and Gulf Pipe Line Co.'s prices in the same field. In the Conroe, Texas, Field The Texas Company, effective March 6, posted as follows: 35-35.9 degrees, 59 cents, with 1 cent added for each degree upward to 40 degrees and over, at 64 cents, which prices are the same as those in the Gulf Coast for oil of like gravity. The Texas Company, retroactive to March 1, posted 35 cents flat for Duval County, Texas, crude oil, and 45 cents for Saxet, Texas, crude, both Southwest Texas fields. The Texas Company met Humble Oil & Refining Co. prices in Gray County and Carson and Hutchinson Counties in the Texas Panhandle, effective March 6. In Gray County it pays from 30 cents to 40 cents per barrel, and in Hutchinson and Carson Counties from 20 cents to 30 cents per barrel, according to gravity of the oil. The Magnolia Petroleum Co. posted like prices in the Panhandle on March 7.

Continental Changes

On February 28 the Continental Oil Co. posted new prices in Carson and Hutchinson Counties in Texas, starting at 20 cents for oil below 28 gravity and paying 2 cents additional for each degree upward to 40 and over, for which it pays 30 cents.

Prices Cut in California

The Standard Oil Co. of California, effective March 6, reduced its prices for crude oil in California from 6 cents to 28 cents per barrel, according to field and gravity. The biggest cuts were made in the high gravity schedules. The average posting for 30 gravity crude under the old schedule was about $1.07 and the new schedule about 80 cents, a difference of 27 cents. The cut in price affected every field in which the company purchases oil in the State.

The Union Oil Co., Associated Oil Co. and General Petroleum Co., effective March 5, posted a lower schedule of prices, paying the same as the Standard Oil Co. of California for oils of the same gravity in the fields in which all purchase.

Wilcox's Texas Schedule

Effective 7 a.m. March 1, 1933, and until further notice, H. F. Wilcox Oil & Gas Co. of Texas will pay the following prices in Texas for crude oil purchased by it and delivered into its lines.

The price of crude oil will be based upon the daily low quotation for U. S. Motor gasoline below 57 octane as shown by the Chicago Journal of Commerce. For each one-eighth of 1 cent so quoted in this publication for such gasoline, we will pay 2 cents per barrel for oil having the gravity of 40 and above. All oil below the gravity of 40 the following discount will be made:

39-39.9 gravity	2 cents per bbl.
38-38.9 gravity	4 cents per bbl.
37-37.9 gravity	6 cents per bbl.
36-36.9 gravity	8 cents per bbl.
35-35.9 gravity	10 cents per bbl.
34-34.9 gravity	12 cents per bbl.
33-33.9 gravity	14 cents per bbl.
32-32.9 gravity	16 cents per bbl.
31-31.9 gravity	18 cents per bbl.
30-30.9 gravity	20 cents per bbl.
29-29.9 gravity	22 cents per bbl.
Below 29 gravity	24 cents per bbl.

May Alter Present Schedules of Mid-Continent Refineries

(Continued from Page 11)

REFINERY OPERATIONS IN NORTH LOUISIANA
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Aver. daily runs Mar.	Aver. daily runs Feb.
Bayou State Refining Co., Hosston	750	(*)	500
Cedar Grove Refining Co., Shreveport	750	750	500
Louisiana Oil Refining Co., Shreveport, Bossier	19,000	18,500	18,600
Spartan Refining Co., Shreveport	10,000	5,500	5,500
Stanolind Oil & Gas Co., Superior	3,500	1,700	3,000
The Texas Company, Shreveport	7,000	(*)	(*)
Williams Refining Co., Shreveport	300	300	(*)
Total	41,000	26,650	27,100

*Shut down.

REFINERY OPERATIONS IN OKLAHOMA
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Aver. daily runs Mar.	Aver. daily runs Feb.
Altitude Petroleum Corp. (J. H. Peacock Refining Co.), Oklahoma City	3,000	1,000	500
Anderson-Prichard Oil Corp., Cyril	5,000	4,000	3,800
Associated Petroleum Corp., Allen	5,000	(*)	(*)
Barnsdall Refineries, Inc., Barnsdall	6,000	3,500	3,500
Barnsdall Refineries, Inc., Okmulgee	10,000	5,000	5,000
Bell Oil & Gas Co., Grandfield	4,500	2,200	2,500
Black Gold Refining Co., Oklahoma City	1,500	800	750
Century Petroleum Co., Tulsa	500	(*)	(*)
Century Petroleum Co., Oklahoma City	2,500	1,500	1,400
Champlin Refining Co., Enid	16,000	7,000	6,500
Cole (L. S.) Refining Co., Oklahoma City			
Columbia Oil Corp., Oklahoma City	3,500	2,500	200
Continental Oil Co., Sapulpa	10,000	(*)	(*)
Continental Oil Co., Ponca City	30,000	16,000	11,000
Cushing Refining & Gasoline Co., Blackwell	1,800	1,500	1,500
Cushing Refining & Gasoline Co., Cushing	3,500	2,500	2,500
Deep Rock Oil Corp., Cushing	10,000	9,000	10,000
Eason Oil Co., Enid	5,000	3,000	2,500
Empire Oil & Refining Co., Okmulgee	4,000	2,500	2,500
Empire Oil & Refining Co., Ponca City	12,000	7,000	6,000
Firestone Refining Co., Oklahoma City	200	600	(*)
Garber Refineries, Inc., and Omar Refining Co., Garber	3,500	(*)	(*)
Gem Refining Co., Oklahoma City	1,000	(*)	(*)
Globe Oil & Refining Co., Blackwell	7,500	5,000	6,000
Johnson Oil Refining Co., Cleveland	6,000	3,500	3,500
Major Oil Co., Oklahoma City	2,000	600	(*)
Mid-Continent Petroleum Corp., West Tulsa	40,000	18,000	18,000
Marathon Oil Co., Boynton	2,500	(*)	1,500
Marathon Oil Co., Bristow	5,000	(*)	(*)
Oklahoma City Refining Co., Oklahoma City	2,500	1,200	200
Phillips Petroleum Co., Okmulgee	6,000	3,500	3,500
Producers Oil Co., Bristow	2,500	1,000	1,000
Producers & Refiners Corp., West Tulsa	6,000	2,600	3,000
Pure Oil Co., Ardmore	5,000	1,200	1,200
Pure Oil Co., Muskogee	9,000	7,000	7,000
Rock Island Refining Co., Beckett	5,000	4,500	3,500
Sinclair Refining Co., Sand Springs	3,000	2,300	2,300
Singleton Gasoline Refining Co., Oklahoma City	400	200	200
Sterling Refining Co., Oklahoma City	3,500	3,000	800
Sun Oil Co., Yale	5,000	2,500	2,000
Sunray Oil Co. (C. E. Wright, receiver), Allen	7,000	3,000	2,500
The Texas Company, West Tulsa	15,000	7,000	8,000
Texas Pacific Coal & Oil Co., Wynnewood	3,000	1,000	1,000
Tide Water Oil Co., Drumright	15,000	7,000	7,000
Western Oil Corp., Beckett	2,000	(*)	(*)
Wilcox Oil & Gas Co., Bristow	5,000	3,000	3,000
Wirt Franklin Petroleum Corp., Ardmore	4,000	2,000	2,650
Yale Oil Corp., Yale	2,000	500	350
York Refining Co., Oklahoma City	3,000	700	400
Total	310,900	148,900	138,750

*Shut down.

REFINERY OPERATIONS IN NORTH CENTRAL TEXAS
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Aver. daily runs Mar.	Aver. daily runs Feb.
Allstate Refining Co., Thrall	3,000	(*)	(*)
American Refining Properties, Wichita Falls	6,000	(*)	(*)
Archer Refining Co., Megargel	1,500	400	300
Atlantic, Pacific & Gulf Refining Co., Wichita Falls	5,000	(*)	(*)
Bobrose Oil & Refineries, Brownwood	2,000	(*)	(*)
Continental Oil Co., Wichita Falls	6,000	1,200	4,000
Dale Oil & Refining Co., Electra	4,000	(*)	(*)
Dixon Creek Oil & Refining Co., Kings Mill	3,500	900	900
Empire Oil & Refining Co., Gainesville	5,000	2,000	2,200
Exchange Petroleum Corp., Albany	500	250	250
Falls Refining Co., Wichita Falls	2,000	450	300
Gratex Refining Co., Graham	500	120	125
Gulf Refining Co., Fort Worth	10,000	6,000	3,400
Haskell Oil Refining Co., Breckenridge	200	200	....
Humble Oil & Refining Co., Breckenridge	2,000	(*)	(*)
Humble Oil & Refining Co., Chilton	4,000	(*)	(*)
Humble Oil & Refining Co., Neches	5,000	1,650	1,850
Iowa Park Producing & Refining Co., Iowa Park	2,500	(*)	(*)
Kent Refining Co., Minerva	2,000	300	285
Kent Refining Co., Angus	4,000	(*)	150
LaSalle Petroleum Co., Burkburnett	3,500	150	100
Macmillan Petroleum Co., Isom	8,000	(*)	(*)
Magnolia Petroleum Co., Fort Worth, No. 1	13,000	4,500	4,700
Magnolia Petroleum Co., Fort Worth, No. 2	6,000	(*)	(*)
Magnolia Petroleum Co., Corsicana	5,000	2,200	2,200
Marathon Oil Co., Fort Worth	5,000	3,500	3,800
Moon Refining Co., Graham	300	50	50
Muenster Refining Co., Muenster	300	(*)	(*)
Olney Oil & Refining Co., Olney	2,500	2,000	900
Oriental Oil Co., Dallas	5,000	800	800
Panhandle Refining Co., Wichita Falls	5,000	2,000	2,000
Petroleum Refractionating Co., Pampa	6,500	4,000	4,500
Pentex Refining Co., Echo	200	50	50
Phillips Petroleum Co., Isom	30,000	18,000	18,000
Phoenix Refining Co., Inc., Dallas	3,000	350	800
Pilot Point Refining Co., Pilot Point	500	200	200
Primrose Refining Co., Wichita Falls	2,500	(*)	(*)
Shamrock Oil Co., Sunray	4,000	300	300
Sinclair Refining Co., Fort Worth	5,000	3,000	3,000
Simms Oil Co., West Dallas	4,500	(*)	(*)
Southland Refining Co., Olney	1,000	135	100
Star Refining & Producing Co., Fort Worth	1,500	600	300
Superior Refining Co., Tiffin	500	100	100
Taylor Refining Co., Taylor	6,000	800	800
Taxman Refining Co., Wichita Falls	3,000	(*)	(*)
The Texas Company, Dallas	16,000	11,000	11,000
The Texas Company, Amarillo	4,000	3,500	3,500
Texas Pacific Coal & Oil Co., Fort Worth	5,000	3,000	3,000
Texas Pacific Coal & Oil Co., Caddo	1,000	500	600
Waggoner Refining Co., Electra	6,000	3,000	2,500
Wilcox Oil & Gas Co. (Pampa Refining Co.), Pampa	4,000	(*)	(*)
White Star Refining Co., Cisco	500	400	400
Total	227,400	77,405	77,360

*Shut down.

REFINERY OPERATIONS IN KANSAS
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Aver. daily runs Mar.	Aver. daily runs Feb.
Altitude Petroleum Corp., Chanute	5,000	(†)	(†)
Altitude Petroleum Corp., Kansas City, Mo.	3,000	500	500
Barnsdall Refineries, Inc., Wichita	4,000	1,250	1,200
Derby Oil Co., Wichita	7,500	4,000	4,000
Dickey Refining Co., McPherson	5,000	1,000	1,500
Eldorado Refining Co., Eldorado	4,500	2,700	2,500
Globe Refining Co., McPherson	6,000	5,000	(*)
Golden Rule Refining Co., Wichita	1,500	500	900
Kanotex Refining Co., Arkansas City	12,000	5,000	4,500
National Refining Co., Coffeyville	6,500	5,000	5,000
Phillips Petroleum Co., Kansas City	15,000	7,500	7,500
Shell Petroleum Corp., Arkansas City	22,000	8,000	8,000
Sinclair Refining Co., Coffeyville	12,000	8,500	8,500
Sinclair Refining Co., Argentine	9,500	5,000	4,000
Skelly Oil Co., Eldorado	23,000	11,000	11,000
Standard Oil Co. of Kansas, Neodesha	20,000	3,500	4,000
Sunflower Refining Co., Hutchinson	2,000	400	800
Vickers Petroleum Co., Potwin	3,500	2,500	2,000
White Eagle Oil Corp., Augusta	15,000	14,000	13,000
Total	169,000	85,350	78,900

*Shut down. †Operating cracking stills.

REFINERY OPERATIONS IN ARKANSAS
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Aver. daily runs Mar.	Aver. daily runs Feb.
Berry Asphalt Co., Waterloo	2,000	800	(*)
Henry H. Cross Co., Smackover	6,000	3,000	4,000
Houston Oil Co., Camden	6,000	(*)	(*)
Kettle Creek Refining Co., Pearson	5,000	(*)	1,600
Lion Oil Refining Co., El Dorado	12,000	6,000	6,000
Macmillan Petroleum Products Co., Norphlet	2,000	1,600	1,500
Ouachita Valley Refining Co., El Dorado	2,000	1,100	1,200
Root Refining Co., El Dorado	10,000	2,500	4,000
Simms Oil Co., Smackover	3,000	2,500	3,500
Union Asphalt Co., El Dorado†	....	....	....
Total	48,000	17,500	20,800

*Shut down. †Reduces residuum purchased from Lion Oil & Refining Co., no crude run.

Varying Properties of Mexican Crudes Explained

(Continued from Page 16)

The conditions under which these stocks were subjected to cracking, and the yields of products obtained in each case are shown in Table 4.

Cracked motor fuels obtained from the above Naranjos stocks analyzed as follows:

CRACKED GASOLINES

Charging stock—	Crude oil	Kerosene	Naphtha	Naphtha	Pressed oil
Gravity, °A.P.I.	61.6	59.6	57.9	60.3	59.7
Sulphur, per cent	....	0.27	0.21	0.19	....
A.S.T.M. 100 c.c. distillation—					
Per cent distilled over			°F.		
Initial B.P.	94	96	100	92	96
10	146	135	152	131	139
20	184	164	198	165	166
50	264	275	305	274	260
90	364	383	354	339	330
E.P.	395	399	374	358	396
Octane number	67	71	69	79	77

The corresponding residues, obtained by cracking the various Naranjos oils to produce the above motor fuels, had the properties shown in Table 5.

TABLE 5—CRACKED RESIDUES

Charging stock—	Crude oil	Kerosene	Naphtha	Naphtha	Pressed oil
Gravity, °A.P.I.	8.1	—0.2	—0.8	1.6	—1.9
Flash (Cleveland open cup), °F.	320	210	190	155	275
Fire (Cleveland open cup), °F.	385	240	240	190	340
Flash (Pensky-Martens), °F.	160	160	160	130	130
Viscosity Furol at 122° F., sec.	609	41	129	23	255
Cold test, °F.	55	10	25	5	45
B.s. and water, per cent	0.2	0.6	0.3	0.7	0.5
Initial B.P., °F.	430	440	410	388	476
Per cent over at 572 °F.	14.0	29.0	26.5	28.0	7.0

Change in Crude Situation Halts Gasoline Quotations

(Continued from Page 23)

rial was offered at an eighth of a cent higher. High cold test materials were offered for resale at prices as low as seven-eighths of a cent. A 10-14 gravity Texas fuel oil of 700 at 100° F. viscosity and 80-90 cold test, was offered for resale at 5 cents a barrel, Texas refinery.

Heating Oil Markets Drop

With demand tapering rapidly and more refiners feeling the need for moving unseasonal material filling up their storage, prices Monday in the distillate and fuel oil markets showed sharp downward breaks. Still lower prices are reported from a few sources, and indications are that further reductions of 5 to 10 cents a barrel on the fuel oils may be expected this week.

In the straw and prime white materials the cuts ranged from a quarter of a cent to three-eighths of a cent. The 32-36 straw zero gas oil moved on the 2.22 cents freight rate into Chicago, moved down a quarter of a cent to 2⅛ to 2¼ cents; the 38-40 straw zero moved down three-eighths of a cent to 2 to 2⅛ cent, moving on the 2.44 cents rate into Chicago district until March 15, when the rate is cut to 2.22 cents. The prime white 38-40 distillate is offered at 2⅛ cents to 2¼ cents, and is in fair demand as prospective tractor and farm engine fuel.

The 32-36 industrial gas oil Monday was quoted at 1⅛ to 1⅜ cents, while some higher cold test U.G.I. is offered at an eighth to a qarter of a cent lower. The 28-30 zero fuel oil was cut 10 cents to a range of 80 to 85 cents; the 26-28 zero fuel oil declined similarly to 65 to 70 cents; the 22-26 zero fuel oil showed a smaller loss, moving to a range of 52½ to 55 cents from a range of 60 to 65 cents. A similar decline is shown in the 18-22 zero fuel oil prices, ranging from 42½ to 45 cents. Below 18 gravity low cold test fuel oil was quoted at 45 to 50 cents. Prices on the 18-22 zero material in the Chicago switching distract were cut to a range of 42½ to 47½ cents, Group 3.

C. E. COSOLOWSKY DEAD

Carl Edward Cosolowsky, superintendent of the Midland division of the South Penn Oil Co., died at his home in Crafton, Pa., on Monday, February 27. He was 63 years old. He had been in ill health for five weeks but not until three weeks before his death was his condition regarded as serious.

Mr. Cosolowsky had been associated with the South Penn Oil Co. since his young manhood entering the service of the company as a clerk in the division superintendent's office in Bradford, Pa.

Mrs. Cosolowsky and one son, Carl, survive.

Eastern Colorado Geology Shows Many Possibilities

(Continued from Page 13)

Pennsylvanian limestones at a depth of 3,870 feet. In the Table Mesa well the drill passed directly from red beds above the horizon of the limestones of the Parker Club well directly into crystalline rock at a depth of 2,065 feet. In the Pipe Springs well (Section 27-27s-49w, Bent County), only 16 miles northeast of the Table Mesa well, a test was drilled to a depth of 6,084 feet without encountering crystalline rock. This well was bottomed in the Ordovician (see Figure 2). It is apparent from these relations that one or more buried ridges of considerable relief, perhaps comparable to that known to exist in the Amarillo area of the Panhandle of Texas, exist in this part of the state. (See Figure 3.)

Structure

A—Julesburg basin and Sierra Grande arch:

As above mentioned, the major structural features of eastern Colorado are the Julesburg Basin and the Sierra Grande arch. The Julesburg Basin extends easterly from the foothills area between Pueblo and the Colorado-Wyoming boundary far into southeastern Wyoming, western Nebraska, and northwestern Kansas. In southeastern Colorado and southwestern Kansas, however, the basin is bounded by the Sierra Grande arch. (See Figure 1.)

The basin is very unsymmetrical, the west flank being very steep thus causing the axis of the structure to lie only a few miles east of the mountain front. It extends in a nearly north-south direction, passing nearly through the city of Greely on the north and extending to and beyond Denver on the south. The dips on the east flank, on the other hand, are very gentle, the inclination amounting to less than 100 feet per mile except at a few localities in Lincoln and adjacent counties where it slightly exceeds this amount. The cross sections on Figure 3 illustrate this relationship.

The depth of drilling to the Muddy and lower sands of the Dakota group in the basin varies widely as a result of this condition. Thus, on the east, west and south flanks of the basin, these sands actually outcrop on the surface while in the deepest portion they lie at a depth of more than 8,000 feet. There is a relatively broad belt on the east and south flanks of the basin in eastern Colorado where the depth to the Muddy varies from 3,000 to 6,000 feet. For obvious reasons this latter mentioned portion of the basin promises to receive the most serious attention as regards Cretaceous oil and gas possibilities. In the marginal portion of the basin, on the other hand, and overlapping the above described belt to some extent test wells will undoubtedly be drilled into the Permian and older horizons.

A careful study of the conditions of sedimentation during Pierre and Fox Hills time reveals some interesting relationships between the structure of the northeastern portion of the Julesburg Basin, as shown by the Dakota sandstone, and the accumulation of the Montana series. It has already been pointed out that in northeastern Colorado the Pierre formation thickens to the westward at an estimated rate of 30 feet per mile. A similar westerly thickening is shown by the Fox Hills. Strangely enough the present rate of dip to the west of the Dakota sandstone is approximately equal to the rate of thickening of the Montana series over a considerable area. It is apparent therefore that the structure of the Dakota in this part of the basin has resulted very largely from a slow subsidence of the basin during the deposition of the Montana series which attains its greatest known thickness in the vicinity of Fort Collins. The possible deltaic orgin of this series in eastern Colorado has been suggested in an earlier part of this paper.

Oil and Gas Reservoirs

The local structures of the Julesburg Basin which may serve as traps for the accumulation of oil and gas are of several distinct types. East of the foothills, along the western margin of the province, the structures are well defined domes, anticlines and monoclines of pronounced dips unquestionably developed in large part by the forces which gave rise to the mountain uplifts to the west. It is noteworthy that this type of structure exists only on the relatively narrow west flank of the basin. Such structures have their counterpart in the producing oil and gas fields of Wyoming.

In the northeastern portion of the basin where there appears to be a close relation between the structure of the Dakota formation and the convergence of the Montana series, the broad, low dip types of surface structures are likely to be of small significance except in special cases where the normal convergence is interrupted by buried ridges or other irregularities. On the other hand, occasional structures of small magnitude developed over buried hills or ridges may occur in the Dakota and older strata and yet may not be manifest on the surface even where the Montana series is exposed.

Other types of traps which are known to occur and which may be of greater importance in eastern Colorado than at present realized are sands which become less porous up the dip either because of an increase in the amount of cementing material or because of the lateral transition of sandstone into shale. It is believed that the accumulation at Greasewood has resulted from one of these causes. Strike faults of small displacement may also form traps in this area.

The southeastern flank of the Julesburg Basin appears to have experienced a somewhat more complex history than the northeastern portion, particularly in that area where the Sierra Grande arch is approached. The regional dip here is much greater than could have been induced by the thickening of the Montana series. Furthermore, the exposures of the Pierre shale show a great deal of crumpling over large areas. These facts suggest one or more uplifts of the Sierra Grande arch subsequent to the deposition of the Pierre shales. It follows that in this area favorable traps may have been formed by tectonic forces as well as by unequal settling over buried hills and ridges, by tightening of the sands up the dip, or by strike faulting.

Over the greater part of the northern, eastern and southern flanks of the Julesburg Basin the gently tilted Cretaceous formations, after truncation by erosion, have been buried to variable depths by Tertiary stream gravels which range in age from the Oligocene to the Pliocene. This situation presents grave difficulties to the geologist who in the future must lean more and more upon the geophysicist and upon well logs for assistance in deciphering the subsurface structural conditions in this area.

The Sierra Grande uplift is an arch of gentle dip extending from the Sierra Grande area of Union County, New Mexico, in a northeasterly direction through Las Animas, Baca, Bent, Prowers, Kiowa, Cheyenne and Kit Carson Counties, Colorado. It plunges in a northeasterly direction, becoming very broad and almost imperceptible in the area north and east of Kit Carson County. On this uplift, at and a short distance beyond the point where it enters Colorado, formations as old as the Permian are exposed on local truncated highs. On that part of the uplift lying south of the Arkansas River the Lakota sandstone is exposed over large areas along the top and on the west flank of the arch. On the east flank, however, it is largely concealed by Tertiary gravels. Farther north successively younger formations, including the Benton, Niobrara, and Pierre, appear on the surface or are overlain by Tertiary gravels of limited thickness.

The small amount of drilling so far undertaken on this arch would seem to indicate that in its southern portion at least it has a core of crystalline rock constituting a buried ridge. There appear to be several minor relief features on this buried ridge which give rise to reflected domes and anticlines in the overlying strata. This condition is apparently exemplified by numerous local structures in Baca and Las Animas Counties on one of which the Table Mesa well was drilled. As above mentioned, the Pipe Springs well, situated only 16 miles

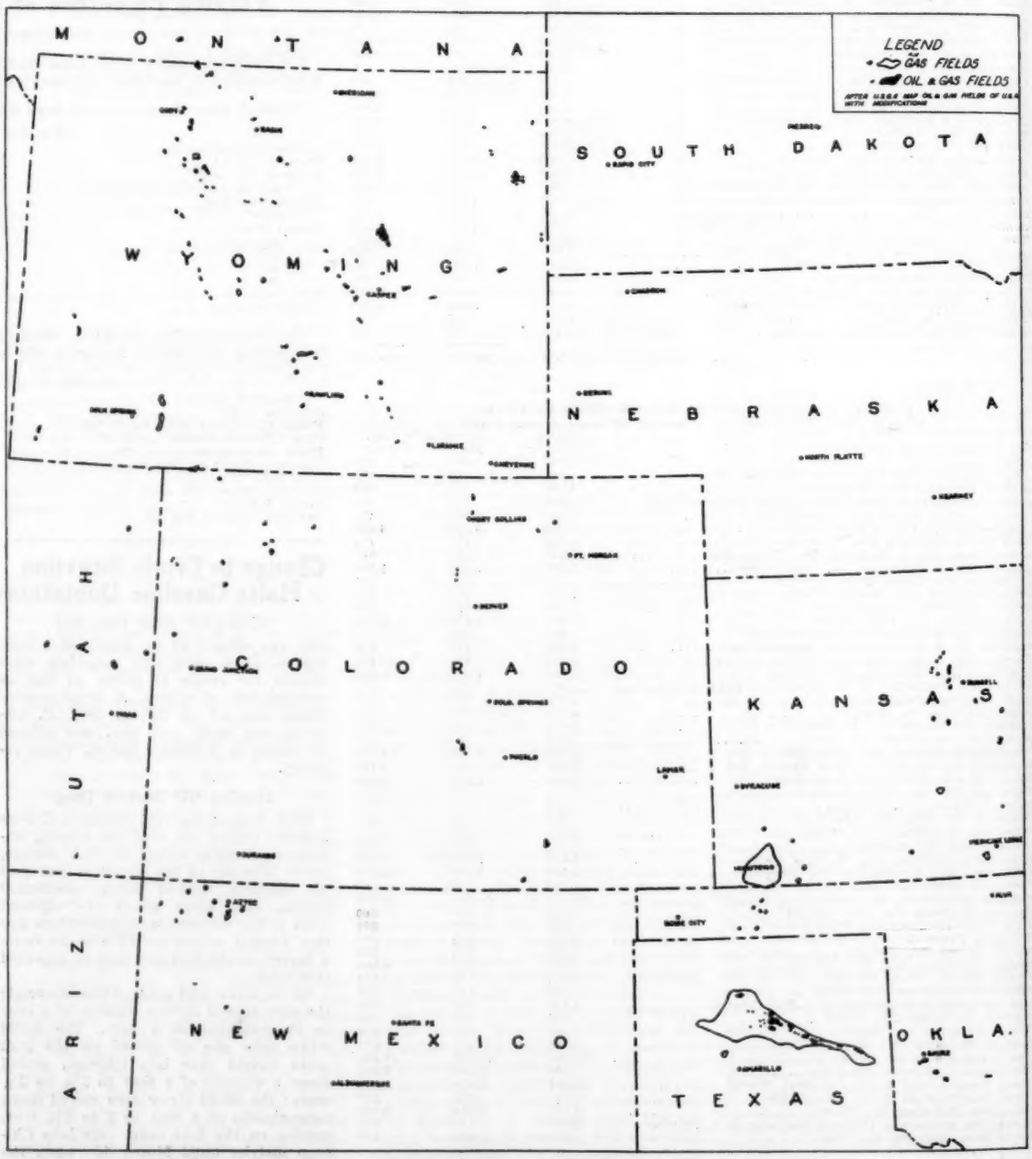


Fig. 4.—Map showing producing oil and gas fields of Colorado and adjacent areas

away in a northeasterly direction, was carried to a depth of 6,084 feet without passing through the Ordovician. The third cross section on Figure 3 illustrates this relationship.

The important types of structures which may form traps for the accumulation of oil and gas in this province are:

(1) Anticlines and domes produced by tectonic forces related to the numerous uplifts of the arch.

(2) Buried hills and ridges reflected in the overlying sedimentary formations.

(3) Anticlines and domes produced in part by unequal settling over buried hills and ridges and in part by tectonic forces.

(4) Unconformable relations on the flanks of the main arch, or of subsidiary buried relief features thereon, resulting in porous strata being overlain by impervious beds.

(5) Monoclinal traps resulting from the tightening or lensing of sands up the dip, or from strike faulting.

B—Minor provinces in eastern Colorado:

In addition to the two main structural provinces heretofore described in eastern Colorado two structural features of less extent should be mentioned. One of these which has been designated the Apishapa uplift, appears to be a northwesterly branch of the main Sierra Grande arch. It extends from central Las Animas County through northern Huerfano and southern Pueblo Counties. It marks the south boundary of the Julesburg Basin. Over the higher part of the uplift, which is located in northwestern Las Animas and northeastern Huerfano Counties, the Dakota formation is exposed at the surface. On the flanks of the uplift the Benton and Niobrara formations appear. So little development work has been done in this area that our knowledge of the subsurface conditions in the Paleozoic formations is insufficient to justify a statement regarding the oil and gas possibilities. However, several local structural highs are known to occur on the uplift.

A second structural feature in southern Colorado worthy of mention is the Trinidad-Raton Basin. This trends in a north-south direction from central Huerfano County, Colorado, into Colfax County, New Mexico. It is occupied by Paleozoic, Mesozoic and Eocene formations of an aggregate thickness of more than 20,000 feet. There has been considerable intrusive and extrusive igneous activity in the basin, the Spanish Peaks with their magnificent systems of radiating dikes being located well within the structure.

The great thickness of continental Eocene sediments in the deeper parts of the basin precludes the possibility of testing the promising horizons of the Cretaceous and older systems. However, these formations are within drilling depth on the flanks of the structure. Several test wells have been drilled into the Cretaceous on favorable structure in this area. Two wells located on the west flank of the basin are reported to have obtained shows of oil and gas.

Oil and Gas Possibilities

Reference has been made to several proven oil areas in eastern Colorado. (See Figure 4.) In all of these the production is obtained from Cretaceous formations. The writers are convinced that additional pools will be discovered in strata of this age east of the mountains in Colorado. The possibilities of discovering commercial oil or gas pools in the Permian and older strata, particularly in the southeastern and extreme eastern parts of the state, are also considered to be very good.

Upon referring to the oil and gas field map of Colorado and adjacent states (Figure 4), one is impressed with the importance of the producing areas to the north, east and south of the district in question. Although it is granted that conditions in eastern Colorado have not yet been demonstrated to be equally favorable in all respects as those in adjacent areas even the most skeptical geologists must agree that there are undoubtedly several undiscovered productive areas in the region.

In the Julesburg Basin the most promising prospective areas are in the belt adjacent to the foothills and on the east limb of this structure. The depth of drilling near the axis of the trough is almost prohibitive at the present time in the light of known potentialities.

The west flank of the basin has been thoroughly explored by geologists and no promising undrilled anticlines or domes are known to occur in this area. However, it is possible that additional accumulations of oil may be found in fissured Pierre shale similar to the occurrences at Florence and Boulder. Unfortunately, the location of such fissured areas cannot be predicted by the geologist or geophysicist in advance of drilling. It is also possible that accumulations of oil may be found on the east side of certain reversed faults which occur in the foothills belt. An oil seepage near Golden apparently related to such a fault has been described by Van Tuyl and McLaren[1].

Field Procedure

On the east flank of the Julesburg Basin favorable source bed and reservoir conditions are known to occur. The data bearing on structural conditions, however, are manifestly incomplete. The occurrence of oil at Greasewood is apparently related to a tightening of the Muddy sand up the dip.

The recent discovery of the St. Anthony location would suggest some closure in the Muddy and Dakota sands analogous to that in the surface formations, in as much as good showings were encountered in both sands. If this is the case it would appear that locally the structures in the Dakota are so pronounced that they do not disappear upward because of convergence. Such a condition might result from unequal settling over a buried hill or ridge.

Magnetometer surveys have suggested the presence of such buried hills and ridges at several localities in eastern Colorado. Owing to the possibility of such structures not being sufficiently pronounced on the surface to be recognizable even where Cretaceous outcrops occur, and owing to the extensive covering of the area with Tertiary gravels, it is recommended that future exploration work be carried on with the magnetometer and the seismograph. The first named instrument may indicate, in some cases at least, the location of buried ridges, while the seismograph may be used to decipher the structure of the Timpas limestone member of the Niobrara which has been demonstrated to be an excellent reflecting horizon. It should not be implied that all magnetic highs represent buried structures as these may result from other causes. The method of prospecting outlined above should also eliminate confusion in those areas where extensive crumpling of the incompetent Pierre shale renders ordinary geological mapping of structure impossible.

The oil and gas possibilities of the southern portion of the Sierra Grande arch are limited almost entirely to the Permian and older horizons, in as much as the Dakota group is either exposed or only slightly buried over the greater part of this area. In view of the fact that these older formations carry oil and gas in commercial quantities in adjacent areas of Kansas, Oklahoma and Texas, it is believed that the potentialities of the area are considerable.

Mention has already been made of the existence of marine strata in the Permian, Pennsylvanian, Mississippian and Ordovician systems in southeastern Colorado and immediately adjacent areas. To be sure, good reservoirs have not been found to exist in all these systems, but they are sufficiently variable in character to permit porous sandstones to appear within short distances. Furthermore, the existence of unconformities in the section should have afforded conditions favorable for the development of porous limestones at several levels.

As already pointed out, the core of the Sierra Grande arch apparently constitutes a buried ridge of considerable magnitude and relief. That some of the local highs in the area are developed over subsidiary buried hills has already been demonstrated by drilling. The fact that important quantities of oil or gas have not been encountered in test wells drilled on or near the axis of the uplift should suggest that no such widespread accumulation such as obtains at Amarillo can be anticipated on this arch.

The Table Mesa test, however, does not condemn a large area for the reason that the well passed directly from red beds into crystalline rocks. Had marine strata with one or more porous zones appeared between the crystalline rock and the red beds the results would have been more conclusive.

The writers consider that there are possibilities of flank production on the Table Mesa and other structures of similar stratigraphic relations and that other structures developed over buried hills of less relief may yield oil and gas from reservoirs arched over topographic highs in the basement rocks.

It is possible that some of the surface structures of this area disappear with depth owing to the existence of buried hills developed in the sedimentary rocks relatively near the surface. Several disconformities are known to be present in the section of this area.

The necessity for using geophysical methods of prospecting on the southern portion of the Sierra Grande arch for locating surface structure is not as great as in the Julesburg Basin for the reason that exposures of consolidated formations are more extensive. However, such methods should prove valuable in determining whether or not structure is lost or increased with depth and also in determining the depth to crystalline rock. It is possible that some well defined structures in the Paleozoic strata are not reflected in the Cretaceous formations. If such is the case geophysical methods can be used to advantage in locating these.

It is reported that locally at least the magnetometer gives negative rather than positive readings over known structures in this part of the state. If this is the case great care should be used in the interpretation of information obtained with this instrument.

[1]F. M. Van Tuyl and R. L. McLaren, "Occurrence of Oil in Crystalline Rocks of Colorado"; Bull. Amer. Assoc. Petrol. Geol., Vol. 16, pp. 769-776, 1932.

Late Sessions of Proration Investigators Yield Little Important Testimony

By SPECIAL CORRESPONDENT

OKLAHOMA CITY, Mar. 7.—The Senate oil committee's investigation of the manner of administering proration in the Oklahoma City Field was fruitful of little in the past week.

The Oklahoma Tax Commission had called the attention of the committee to the fact that Clifton Keeler, an engineer, and one of Col. Cicero Murray's field lieutenants had received the sum of $200 from the White Oak Corp. The committee summoned Keeler to the witness stand. Keeler explained the matter by saying that while the Refiners' Production Co., a White Oak subsidiary was drilling a well in the field, he advised where pipe should be set and how to bring the well in to the best advantage. Ben F. Green of the White Oak Corp. met him later and handed him a check for $200 "to show his appreciation," Keeler said. Keeler denied that the money was received for "protection" or as a brokerage fee, and in answer to a question said he had not given any of the money to Col. Cicero Murray. Mrs. Keeler testified that she had received five checks for $100 each, which the senate committee was told were in payment for geological and engineering work done by her husband for the White Oak Corp.

J. Steve Anderson, vice president of the Anderson-Prichard Oil Corp. testified as to payment of assessments to Cicero Murray, umpire, to meet the costs of prorating the Oklahoma City Field. Every operator in the Oklahoma City Field is expected to contribute a sum proportionate to the extent of his holdings in the field, this money to be used in paying the salaries and field expense of the umpire and his force. Mr. Anderson in the course of his testimony said the big companies operating in the Oklahoma City Field had from the beginning acted in good faith.

Former Corporation Commissioner C. C. Childers, whose name had been brought into the inquiry very prominently in the early hearings, and who has been waiting to be heard for several weeks, testified late in the week. Phillip Flaxman, a broker, had testified to having contacted E. D. Hicks Jr., chief clerk of the Corporation Commission, for the purpose of making an arrangement with Commissioners E. R. Hughes and C. C. Childers to open the Oklahoma City Field, for which, Flaxman said, Hughes and Childers were to receive a large sum of money. Flaxman said his scheme fell through when the price of oil was advanced and was never taken up again. Hicks resigned his position with the Corporation Commission and both Childers and Hughes denied that they had ever been approached with such a proposition. In his testimony Childers said he had never been in favor of prorating the Oklahoma City Field. He said that while Paul Walker was chairman of the Commission he dominated that body and that there were very few conferences held by the three commissioners on proration matters. He said Walker would sign the orders and then send them to the other commissioners for their signatures. Childers said Walker appeared to dislike Hughes and himself.

Their presence on the floor of the Senate made it necessary for the members of the committee to adjourn the hearing and a number of witnesses were told they would be called upon later.

Standard of California Wins Elk Hills Decision

SAN FRANCISCO, Calif., Mar. 6.—Standard Oil Co. officials express opinion that the company has finally established a clear title to the long-disputed "Section 36" in Elk Hills, where the company has put some $6,000,000 in developments. This expression followed filing at Sacramento of the opinion of the general land commissioner, C. C. Moore, Washington, D. C., that the section was not "known mineral land" when the original plat of the Elk Hills was approved on January 26, 1903.

Standard Oil Co. bought the 480 acres in 1908, paying $20 an acre to a group which had obtained it from the State on payment of tax claims amounting to about $3.28 an acre. Three years later Naval Reserve No. 1 was formed on suggestions of geologists that oil might be there. In 1916 Standard offered to cede its 480 acres to the reserve, but navy experts did not want it.

In 1918 Standard drilled a wildcat and in 1919 discovered oil. Then government spokesmen claimed Standard had known all along there was oil in the Elk Hills, and for 13 years millions of words have flown back and forth in the controversy. The crux of the contention was the law that original public lands known to contain mineral prior to 1903 were recoverable by the Government.

With the filing of the opinion supporting Standard's claim, there remains but the seal of the Department of the Interior, to close the issue. The land is estimated to be worth $10,000,000.

M. B. FINNESSY DEAD

Michael B. Finnessy, oil producer in the Allegany, Bradford and Kane Fields, died in Olean, N. Y., on Sunday, February 26, after a two-week illness.

Increase in Howard-Glasscock Pool Allowable; New Test Is Planned for Runnels County

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Mar. 6.—An increase in allowable for Howard-Glasscock County pools, another test for the active area in Ector County, and a new test for Runnels County were the features in West Texas during the week. Deepening of old producers in the first mentioned areas is also coming in for attention since one company has already deepened two of its wells to the 2,400-foot level from the former level of around 2,200 feet, and intends deepening other wells which are making water.

Ector County

L. G. Bradstreet of Fort Worth will drill a test in the SW of Section 16, Block 43, Township 2s, T.&P. Survey, northwest of the Harrison, Turner and others' No. 1 Addis discovery well, and east of the Gault-Brown dry hole in Ector County.

L. C. Harrison and others are to drill a second test in the same section as their discovery well, according to reports from the field. The owners are selling their oil to a Big Spring refinery, consequently are in position to market the oil they produce from other wells in the area, which is an incentive for them to drill other wells.

Moran Drilling Co.'s No. 1 Smith location is in Section 12, Block 43, Township 1s, T.&P. Survey, approximately 2½ miles southeast of the two Cowden wells of the Stanolind Oil & Gas Co. This will be an exceedingly interesting test.

Another test may be drilled in Section 16, Block 43, Township 2s, and still another is rumored for Section 17, Block 43, Township 1n. This location would be approximately 1½ miles north of the Cowden producers. Other tests for this area are rumored, but deals have not yet been consummated for these tests. The area is the most active one in the Permian Basin and is scheduled to remain so for the next few months, with possibilities of proving a pool of major importance, approximately 18 miles in length.

Runnels County

M. T. Anderson of Coleman is to drill a test on the W. F. James land, approximately three-quarters of a mile northeast of the nearest producer in the McMillan Pool, Runnels County, and may drill another test about a mile farther northeast.

Howard-Glasscok

The daily allowable of the Howard-Glasscock County areas have been increased by the Railroad Commission from 14,000 to 16,000 bbls. The Cosden Oil Co. has raised its nominations from 4,500 to 5,500 bbls., and full operations of the plant are scheduled to be resumed this month. Shell Pipe Line Co. and Col-Tex Pipe Line Co. also raised their nominations in the pool.

Fisher County

The Shell Pipe Line Co. was scheduled to start running oil from northeast Fisher County on March 7, paying 30 cents per barrel for the 36 gravity oil, or on the West Texas oil basis instead of on the Mid-Continent gravity basis. The company recently closed a contract with Cranfill & Reynolds for a large amount of stored oil, and agreed to run 2,000 bbls. per day from their wells in the pool after building a 4-inch line to connect with its McCamey-Healdton carrier. The Humble Oil & Refining Co. followed Shell's action in posting the lower price, which was protested by a group of oil men assembled in Breckenridge on March 2 to organize the West Central Texas Oil & Gas Association.

The Southern Oil Co., which has production in the same area, has also sold its oil to the Shell Pipe Line Co. Cranfill & Reynolds will gather the former's oil and deliver to the Shell, charging Southern 7 cents per barrel gathering charge, leaving 23 cents per barrel for the producer.

All 32 wells in the Fisher County Pool now have a daily allowable of 156 bbls. Previously the wells had been limited to 20 bbls. per well, the amount the Humble Oil & Refining Co. elected to run.

WICHITA FALLS

T. G. Shaw Oil Co.'s No. 2 Marshall, in Section 3,401, T.E.&L. Survey, 3 miles east of Olney, has opened another shallow pool in Young County. The well topped a sand at 880 feet and was shut down at 881 feet, making an initial production of 40 bbls. in 18 hours on the pump. Elevation of the test is 1,161 feet. As in all cases of shallow discoveries in this district, they lead to a brisk drilling campaign until the area is completely defined. The pools are generally small, but shallow wells and high gravity oil spur the operators to drilling the areas around such discoveries. This area can expect to be drilled accordingly within the next few weeks.

Montague County

Seitz & Co. are rigging up a rotary on the L. L. Cobb farm on a large block in which the Humble Oil & Refining Co. has a half interest. Contract depth of the test is 2,500 feet. This will be an interesting test for eastern Montague County.

The Prideaux Field of southeastern Archer and adjoining counties is now getting acid treatment. Fresno Oil Co.'s No. 31 Prideaux, the first well in the pool to be treated, has not yet been tested. Five hundred gallons of acid were used with a 50-bbl. oil load, and 500 pounds pressure. This is a large shallow producing area covering the corners of four counties. Production is found in both sand and lime between 500 and 700 feet.

Clay County

The Magnolia Pipe Line Co. is to build 5 miles of 2-inch line in northwest Clay County to give three wells their first outlet in this area. The Texas Company has taken a large block in this area, and further drilling will probably be started as a result of this new construction into the area. Metzner and Gerard's No. 2 A. Thornberry, the last well drilled in the area, logged oil sand from 345-52 feet, the hole filling 310 feet with oil in two hours. It is estimated good for 40 bbls., but more conservative estimates place it as being good for from 20 to 25 bbls.

Deep Oil Development Co.'s No. 1 L. F. Wilson, on Lease 5 in the Chalk Hill Pool, Archer County, producing from the Canyon series and completed about a year ago, is pumping only 8 bbls. of oil daily with about 25 bbls. of water. No. 1 Wilson, on Lease 18, on the west side of the pool, has also declined to a low output. Other Canyon wells in the pool have held up on production.

Jack County

Root Drilling Co.'s No. 1 Coleman-Leach has opened another shallow area in Jack County. It is in the S.P.R.R. Survey, Abstract 578. It logged the oil sand from 523-30 feet and is estimated good for 15 or 20 bbls. per day. It logged the Gunsight lime from 517-23 feet.

PANHANDLE

As a result of an increase in demand for Panhandle crude nominations of the purchasers in the field were advanced 2,000 bbls. bringing the new allowable up to 43,000 bbls. from 1,844 wells. This number does not take into account wells shut down temporarily or new producers without pipe line connections. Of this amount 866 are classed as marginal wells with a total daily production of 26,513 bbls. Total potential for the field is 148,978 bbls.

On Friday, March 24, another hearing will be held at Amarillo by the railroad commission to consider applications of several companies for permits to extract gasoline from gas from their wells in the Panhandle district, and where practical, to make beneficial use of the residue.

Petition to restrain the railroad commission and the attorney general from taking proration litigation against Danciger Oil & Refining Co. to state courts was heard at Fort Worth on March 2 by Federal Judge James C. Wilson. The company has instituted suit in Federal Court seeking to restrain the commission and other state officials from enforcing its proration orders against the company in the Panhandle. Judge Wilson on February 25 declined to grant the temporary injunction, but set the case for hearing before a statutory court on March 13. On a cross action petition, Judge Wilson said he was willing to grant the State an injunction against the company, but required posting of a $10,000 bond. Arguments were presented attempting to secure a temporary injunction against the company without the bond requirement.

On March 6 Judge Wilson granted a temporary restraining order requiring the Danciger company to abide by proration dependent on the State posting a $500 bond instead of $10,000 as formerly requested. This injunction will run until a three-judge hearing on this case is held in Dallas March 11.

The State will probably ask for a blanket injunction against all of the short pipe lines in East Texas to prevent them from moving oil from leases which are alleged to have overproduced. This will put a stop to many tank car shipments, if obtained.

Wildcat Operations in West Texas

Week Ending March 6

Company, well, farm name, section and block—	Remarks:
BREWSTER COUNTY	
Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. Sur.	S.D. 1,935 ft.
E. L. Chapman's No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur.	S.D. 1,302 ft.
Joiner's No. 1 McIntire, 553 ft. from S and 1,330 ft. from E. Sec. 31, Blk. 352, W. J. Mitchell Sur.	T.D. 550 ft.; fishing tools.
Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 930 ft. from N and 2,500 ft. from E of Sec. 16, Blk. G-15, G.C.& S.F. Sur.	S.D. 2,900 ft.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 miles south Alpine	S.D. 1,750 ft.
CONCHO COUNTY	
Beasley et al's No. 1 Waring Estate, 400 ft. from N and E, Sec. 163, T.&N.O. Sur.	T.D. 2,586 ft.; pumping 5 bbls. oil per day and some water.
Mann et al's No. 1 Hartgrove, 150 ft. from N and 75 ft. from E, Sec. 6, T.&N.O. Sur.	Drlg. 110 ft.
CRANE COUNTY	
Gulf Prod. Co.'s No. 102 McElroy, 1,980 ft. from S and 660 ft. from W lines of Sec. 197, Blk. F, C.C.S.D. R.G.N.G. Sur.	Cellar.
CROCKETT COUNTY	
Chambers et al's No. 1 Hoover, 1,650 ft. N and 330 ft. from E, Sec. 1, Blk. FF, B.&B. Sur.	S.D. 3,100 ft.; tested 5 bbls. per day after shots.
Doleman & Moore's No. 1 Ferner, 2,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 2, I.&G.N. Sur.	Spudded and S.D.
Stanolind Oil & Gas Co. et al's No. 1 Todd, 1,370 ft. from N and 1,320 ft. from E, Sec. 67, Blk. UV, G.C.&S.F. Sur.	T.D. 8,042 ft.; plugged back to 7,746 ft.; bailed 1½ bailers water hourly; plugged back to 7,700 ft.; waiting on cement.
The Texas Company's No. 1 B. B. Ingham, 330 ft. from S and 2,330 ft. from E line, Sec. 36½, I.&G.N. Sur.	Small show gas 2,080 ft.; ½ baller sulphur water per hour 2,080-85 ft.; S.D. 2,504 ft., blue shale.
J. D. Young Co.'s No. 1 Shannon, 330 ft. from N and W, Sec. 35, Blk. 1, G.C.&S.F. Sur.	S.D. 2,235 ft.
CULBERSON COUNTY	
Harris & Haun's No. 1 fee	S.D. 2,670 ft.
Miller Bros.' No. 1 fee, 1,980 ft. from N line and 660 ft. from E line of Sec. 61, Blk. 97, P.S.L. Sur.	Location.
Milton-Dorsey's No. 1 Biggs, 4,181 ft. from N and 150 ft. from E, Sec. 2, Blk. 112, P.S.L. Sur.	Location.
ECTOR COUNTY	
Cherry et al's No. 1 Johnson, 1,320 ft. from S line and 660 ft. from E line of Sec. 41, Blk. 43, Twp. 1s, T.&P. Sur.	Spudded and S.D.
J. M. Cooper et al's No. 1 Cowden, 2,310 ft. from S and W, Sec. 16, Blk. 43, Twp. 2s, T.&P. Sur.	Location.
L. C. Harrison et al's No. 1 Addis, 330 ft. from N and 1,320 ft. from W, Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.	T.D. 4,061 ft.; flowing 450 bbls. day.
The Moran Co.'s No. 1 Smith, 330 ft. from N and W lines of Sec. 12, Blk. 43, Twp. 1s, T.&P. Sur.	Location.
Stanolind O. & G. Co.'s No. 1 Cowden, 330 ft. from S and 1,320 ft. from W, Sec. 26, Blk. 43, Twp. 2s, T.&P. Sur.	T.D. 3,647 ft., anhydrite; cmtd. with 200 sacks; to sidetrack bit.

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COMPLETIONS IN WICHITA FALLS DISTRICT

Archer County

American Refining Co. Properties' No. 9 W. H. Portwood, slight show oil 1,407-13 feet, dry and abandoned, total depth 1,426 feet. R. W. Reynolds and others' No. 1 J. D. Powell, dry sand 1,333-51 feet, broken sand and shale 1,351-65 feet, dry and abandoned, total depth 1,365 feet. Wilson & Russell's No. 15 H. O. Prideaux, oil sand 607-12 feet, oil sand

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Bill Drafted to Penalize Transportation of Illegally Produced Oil From the East Texas District

By L. E. BREDBERG

DALLAS, Tex., Mar. 6.—On one day of the past week 422 tank cars were known to have left the East Texas district full of oil. This would amount to at least 90,000 bbls., while the distribution report shows only around 39,680 bbls. being shipped by this method every day. One of the pipe lines running from the field received 48,000 bbls. in one day, far in excess of the allowable which would be run from the leases to which it was connected if the wells were producing according to Railroad Commission orders.

On March 3 District Judge W. F. Robertson granted a temporary injunction restraining the Sinclair Prairie Oil Co. from overproduincg its 481 wells in the field, and the Sinclair Prairie Pipe Line Co. was temporarily restrained from transporting oil out of the field in excess of the allowable. If the company did run more oil than the allowable calls for from its leases this oil could easily have been back allowable oil. Other companies have been reported to have run "back allowable" oil, and where a company has "back allowable" oil to its credit, yet unproduced, or standing in tanks, and has a market for this oil, the commission would no doubt have less trouble and worries on its hands if it granted permission for running this oil, but keeping check on wells and tanks to see that oil above the specified amount was not run also.

Pipe Line Conferences

On March 2 one of the Railroad Commissioners conferred with a group of pipe line superintendents at Kilgore and stated to one of the newspapers that 100 per cent co-operation was pledged. The commission has asked pipe line companies to send representatives to Austin on Monday to discuss the situation in an effort to get the smaller pipe line companies and gathering line companies to refrain from transporting overproduced oil.

There are 25 local refineries in the field operating at the present time, handling the 36,466 bbls. per day run to them. The 32 independent gathering systems are supplying most of the 41 loading racks in the district with the 39,680 bbls. of oil which is being shipped out each day. There are over 9,775 wells on production making it exceedingly difficult for commission men to check the overproducers.

Although the railroads have a temporary injunction to prevent the commission from interfering with spotting cars and shipping oil by tank cars, one pipe line company representative said transportation of "hot oil" by this method could be stopped if the commission would check the small gathering systems and lines connected with the loading racks from which the oil is being shipped. The commission may eventually check the runs through these lines and finally put a stop to a great amount of the hauling now being done by tank cars. One of the commissioners stated that the field force checking these smaller lines, was being increased so as to check all runs made and the next few weeks may see the diminishing of tank car shipments.

The commission is now obtaining "blanket" injunctions against violators; if an operator is found overproducing one of his leases, all other leases owned by him are included in the injunction obtained to restrain him from overproducing his properties.

A report of violations by 12 pipe line companies and refineries which are alleged to have transported overproduced or "hot" oil to tank car racks at the various railroads has been handed to the attorney general, with a request to file suit at once.

New Penalty Bill

At the pipe line committee meeting at Austin, at which the movement of "hot" oil was discussed, Hines Baker of the Humble Oil & Refining Co., Jacob F. Wolters of The Texas Company, Charles Black of the Illinois Pipe Line Co. and S. M. Leftwich, representing the Atlantic Oil Producing and Atlantic Pipe Line companies, were appointed as a committee to redraft House Bill 778 to make penalties more severe as a means of controlling the movement of such oil.

On corporations the minimum penalty would be the value of the "hot" oil moved by such pipe lines and the maximum penalty would be double the value of such oil. On agents of corporations, violation would be declared a misdemeanor with jail sentence. Such a law would include all carriers and transporters, not just common carriers.

The bill as introduced by 11 of the state representatives, several of which have been holding a legislative investigation into proration in East Texas, reads as follows:

"A bill making it unlawful for any railroad or pipe line common carrier or truck line common carrier to accept for shipment any crude petroleum without requiring the furnishing by the shipper of evidence, as defined in this act, that such crude petroleum was not produced in excess of the amount of allowed to be produced under any rule, regulation or order of the Railroad Commission of Texas; prescribing penalties for the violation of this act and authorizing suit to be brought for recovery of same; authorizing suits for injunction to restrain threatened violations of this act; and declaring an emergency."

Out of nearly 10,000,000 bbls. of steel storage in the district only a little over 2,110,000 bbls. of oil is held in these tanks while 7,503,000 bbls. of storage is empty and ready for oil. Major trunk lines can handle around 810,000 bbls. per day, and with 27 operating local refineries and over 40 tank car racks ready to handle oil, at least 1,500,000 bbls. of oil per day can be disposed of. The small operator who has no pipe line outlet, but is depending on trucks to haul his oil will be "out of luck" if offset wells are opened and allowed to produce their maximum potential in case of an overthrow of proration.

There were 26 locations staked this week, while 39 wells were completed. Both show a slight gain over past weeks. There were three wildcat locations staked outside the field and two wildcats were completed. One location was staked in Smith County, one in Titus County and one in Van Zandt County.

Leon County

Shell Petroleum Corp. and others' No. 1 W. M. Phillips, in the Swayze Survey, Leon County, has been abandoned at 6,300 feet after making several tests of two different streaks of saturated Woodbine sand, and drilling into salt water. Elevation is 423 feet. Top of the first sand was cored at 6,054 feet with base at 6,068 feet, and second sand was cored from 6,147-58 feet.

The companies have been "reshooting" the large block on which this test is located, and a second test is expected to be started in the near future. No tentative location has yet been announced.

The test has been one of the most interesting in East Texas. A large lease and royalty play resulted when reports got out that the several companies interested in the large block would drill. Leases and royalties advanced in price at a rapid rate until all available land and royalty had been purchased in the vicinity of the block. Other blocks were also purchased.

DeGenther's No. 1 McLain, in the Sam Brooks Survey, Wood County, is another wildcat failure for the district. It was abandoned as dry at a total depth of 3,928 feet. Elevation is 455 feet.

J. E. Winans and C. C. Curtis, the former of Fort Worth, have staked location and are moving in material for a Woodbine sand test to be drilled 1½ miles west of the Mexia Field and between that fault line field and the Nigger Creek Field. Location is in the northwest quarter of the Emma Daniels farm in the Pedro Varila Survey, Limestone County.

Van Zandt Gas Line

Heretofore gas from wells in the Van Field has been processed in the casinghead gasoline plant in the north end of the field, and used in the production camps and the town of Van, but another outlet will soon be furnished by the United Gas Public Service Co. which will build 12 miles of 10-inch line from its main line system to the gasoline plant and wells which are producing natural gas in the field. This line will take residue gas from the plant, and take ratably from the gas wells thereby furnishing a much needed outlet for the sweet gas, most of the residue having been burned in flares up to this time, and the gassers standing shut in. This gas company serves towns along its right of way in the district, and connects with the cities of Dallas and Fort Worth where it serves an industrial market with fuel.

East Central Texas Wildcats

Week Ending March 6

ANDERSON COUNTY

Company, well, farm name, section and block—	Remarks
Barclay et al's No. 1 J. C. Beard, 150 ft. out of most westerly NE cor. of 178-ac. lease, J. Trimmer Sur.	**S.D. 1,518 ft.**
C. R. Wilmuth et al's No. 1 N. B. Watson, 500 ft. from W line and 4,850 ft. from N of S line of survey in S½ of 129-ac. tract, M. Main Sur.	T.D. 1,538 ft.

ANGELINA COUNTY

Crosbie et al's No. 1 John C. Davis, 150 ft. from N of center of tract and survey, John H. Graham Sur.	**T.D. 1,190 ft.; S.D.**
W. J. Chandler's No. 1 L. J. Dearman, 300 ft. from S and W lines of 20-ac. tract, J. T. Peavy Sur.	S.D. 1,680 ft.
H. C. Jennings et al's No. 1 Colmorgan, 150 ft. from N line and 1,300 ft. from E line of 200-ac. tract, 4 miles N of Lufkin, J. Messingill Sur.	Drlg. 160 ft.; shale.

BOWIE COUNTY

Tom Bell et al's No. 1 C. M. Moss, 1,800 ft. from N line and 2,160 ft. from W line of 465-ac. tract and survey, O. D. Walton Sur.	S.D. 1,800 ft.

CHEROKEE COUNTY

Barkley Tate et al's No. 1 H. E. Neal, 330 ft. from N and W lines of tract, J. M. Prosella Sur.	Derrick
Hooper et al's No. 1 Doctor Overton, 330 ft. from N and E lines of tract and 330 ft. out of most easterly NE cor. of survey, Wesley Dikes Sur.	Drill stem test 3,625-56 ft.; made 17 fourbles oil, 3 fourbles mud in 18 min.; T.D. 3,656 ft.; swabbed; goes dead; making some salt water; waiting on csg.
L. J. Hopcroft et al's No. 1 J. R. Taylor, 2,600 ft. from E line and 2,000 ft. from S line of survey, G. M. Doherty Sur.	Location
Loring Oil Co.'s No. 1 F. M. Swearingen, 330 ft. from S and E lines of 68-ac. tract, 2,800 ft. from W line and 330 ft. from S line of survey, Oliver Lund Sur., 1 mile SW of Maydelle	Drlg. 5,006 ft.; red shale.
Mid-Tex Oil Co.'s No. 1 A. Pace (formerly Clopton), 285 ft. from N line and 330 ft. from most northerly E line of 40-ac. lease, Wesley Dikes Sur.	T.D. 3,665 ft.; swabbing water and oil.
Wilson & Stubbs' No. 1 L. Robert, 450 ft. from S and 150 ft. from W line of lease, J. B. Wolfin Sur.	Prepare to deepen; T.D. 3,600 ft.

DELTA COUNTY

Commerce Oil Co.'s No. 1 Ablowich, 150 ft. from S line and 776 ft. from W line of H. D. Jewett 62-ac. tract, E. Chick Sur.	S.D. 3,813 ft.

ELLIS COUNTY

Armstrong Bros.' No. 1 Reeves	S.D. 300 ft.
Armstrong Bros.' No. 1 John Lee Winn, 1,650 ft. from E and 150 ft. from S of Orland, Orlo Wheeler Sur.	S.D. 1,435 ft.
George Beasley's No. 1 Francis Borck, 350 ft. from SW line and 350 ft. from S and E lines of tract and grant, 11 League grant	Rig up.
Clark Brooks' No. 1 Anderson, SE cor. of 3,900-ac. tract, 10 miles SW of Waxachachie, E. C. Branch Sur.	S.D. 1,050 ft.
Paris Oil Co.'s No. 1 O. S. Bain, 1,500 ft. from S line and 300 ft. from W line of 60-ac. lease, R. M. Williams Sur.	S.D. 985 ft.

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COMPLETIONS IN EAST TEXAS

North Gregg County

Amerada Petroleum Corp.'s No. 9 L. R. Hearne, top sand 3,518 feet, initial production 19 bbls. in 15 minutes through open tubing, total depth 3,532 feet. Humble Oil & Refining Co.'s No. 14 H. M. Lawrence, top sand 3,631 feet, initial production 69 bbls. per hour through three-quarters inch tubing choke, total depth 3,672 feet. Magnolia Petroleum Co.'s No. 11 H. Hampton, top sand 3,682 feet, initial production 100 bbls. per hour through 1-inch tubing choke, total depth 3,702 feet; No. 3 Magrill, top sand 3,653 feet, initial production 120 bbls. per hour through open tubing, total depth 3,689 feet; No. 6 Zeigler, top sand 3,477 feet, initial production 160 bbls. per hour through open tubing, total depth 3,490

feet. Stanolind Oil & Gas Co.'s No. 11-C Flewellen, top sand 3,625 feet, initial production 15 bbls. in 15 minutes through open tubing, total depth 3,650 feet.

South Gregg County

Daniels & Sheppard's No. 1 W. P. Crews, top sand 3,729 feet, initial production 35 bbls. by heads per day and 30 per cent salt water, total depth 3,734 feet. Gulf Production Co.'s No. 5 William Clayton, top sand 3,540 feet, initial production 70 bbls. per hour through three-quarters inch tubing choke, total depth 3,560 feet. J. T. Burlingame's (formerly Empire Gas & Fuel Co.) No. 2 H. E. Thomas, top sand 3,728 feet, initial production 125 bbls. in 24 hours, flowing by heads, total depth 3,729 feet. Magnolia Petroleum Co.'s No. 12 L. A. Griffin, top sand 3,568 feet, initial production 20 bbls. in 15 minutes through 1-inch tubing choke, total depth 3,610 feet; No. 12 A. Hicks, top sand 3,645 feet, initial production 104 bbls. per hour through open tubing, total depth 3,647 feet; No. 13 A. Hicks, top sand 3,730 feet, initial production 95 bbls. per hour through open tubing, total depth 3,731 feet; No. 9 J. Radford, top sand 3,693 feet, initial production 120 bbls. per hour through open tubing, total depth 3,696 feet.

Mazda Oil Co.'s No. 1 J. A. King, top sand 3,660 feet, initial production 35 bbls. in 30 minutes through three-quarters inch tubing choke, total depth 3,665 feet. Mid-Field Oil Co.'s No. 2 Sample, top sand 3,718 feet, initial production 22 bbls. per hour through open tubing, total depth 3,723 feet. National Security Co.'s No. 3 Knowles, top sand 3,545 feet, initial production 100 bbls. in 45 minutes through open tubing, total depth 3,600 feet. Reserve Petroleum Co.'s No. 1 A. Godfrey, top sand 3,581 feet, initial production 115 bbls. per hour through open tubing, total depth 3,605 feet. Rhoades Drilling Co.'s No. 10 Sabine River, top sand 3,520 feet, initial production 30 bbls. in 30 minutes through 1-inch tubing, total depth 3,542 feet. Thorpe's No. 1 J. A. Butts, abandoned location.

North Rusk County

Humble Oil & Refining Co.'s No. 65 L. D. Crim, top sand 3,690 feet, initial production 75 bbls. per hour through three-quarters inch tubing choke, total depth 3,712 feet.

South Rusk County

David Donoghue, receiver's No. 2 Goforth, top sand 3,731 feet, initial production 100 bbls. in 30 minutes through 2-inch open tubing, total depth 3,741 feet. Humble Oil & Refining Co.'s No. 7-B Ida Holt, top sand 3,721 feet, initial production 75 bbls. in 30 minutes through three-quarters inch choke, total depth 3,774 feet; No. 31 Kangerga, top sand 3,659 feet, initial production 32 bbls. in 30 minutes through three-quarters inch choke, total depth 3,692 feet; No. 8-B Kangerga, top sand 3,614 feet, initial production 21 bbls. in 30 minutes through three-quarters inch choke, total depth 3,634 feet; No. 18 J. W. Turner, top sand 3,659 feet, initial production 62 bbls. per hour through three-quarters inch choke, total depth 3,775 feet; No. 10 A. L. Walker, top sand 3,643 feet, initial production 30 bbls. in 30 minutes through three-quarters inch choke, total depth 3,653 feet.

Jenkins Brothers' No. 1 Daisy Bradford, top sand 3,520 feet, initial production 31 bbls. in 12 hours on swab, total depth 3,605 feet. Mid-Kansas Oil & Gas Co.'s No. 7 Kangerga, top sand 3,633 feet, initial production 104 bbls. per hour on 2-inch lead, total depth 3,651 feet; No. 10 J. F. Mason, top sand 3,653 feet, initial production 88 bbls. per hour on 2-inch lead, open, total depth 3,713 feet. Overton Refining Co.'s No. 2 Maxwell, top sand 3,790 feet, initial production 75 bbls. in 30 minutes through three-quarters inch choke, total depth 3,840 feet. Texas Unity Co.'s No. 2 I.&G.N., location abandoned. Sinclair Prairie Oil Co.'s No. 8 F. B. Wilson, top sand 3,652 feet, initial production 31 bbls. in 15 minutes through 2½-inch tubing, total depth 3,667 feet. The Texas Company's No. 8 J. M. Price, top sand 3,588 feet, initial production 70 bbls. per hour through open 2-inch tubing, total depth 3,634 feet. Trico Oil Co.'s No. 1 D. Bradford, top sand 3,520 feet, initial production 10 bbls. per hour through open 2-inch tubing, total depth 3,600 feet. Ward Oil Co.'s No. 15 Thrash, top sand 3,752 feet, initial production 80 bbls. per hour through open 2-inch tubing, total depth 3,790 feet.

Upshur County

Humble Oil & Refining Co.'s No. 14 W. W. Holland, top sand 3,648 feet, initial production 64 bbls. per hour through three-quarters inch tubing choke, total depth 3,676 feet; No. 7 J. M. Smith, top sand 3,636 feet, initial production 11 bbls. in 15 minutes through 2-inch tubing choke, total depth 3,672 feet. Merrick, Inc.'s No. 6 Nicholson, top sand 3,639

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East Central Texas Wildcats

(Continued from Preceding Page)

FANNIN COUNTY

Lauther Kenn et al's No. 1 Steren, center of survey, 3 miles SW of Ladonia, John Wills Sur. ..... Top Pecan Gap 440 ft.; S.D. 740 ft.

FRANKLIN COUNTY

Whitecak Oil Co.'s No. 1 O. C. Clanton, 750 ft. from S line of survey and 150 ft. from W line of survey, S. McCreary Sur. ..... S.D. 572 ft.

FREESTONE COUNTY

Clyde Creighton's No. 1 Holley Bros., 854 ft. from W line and center of N and S lines of lease, A.B.M. Sur. ..... S.D. 4,130 ft. in Austin chalk.

GREGG COUNTY

Bay Oil Corp.'s No. 5 J. M. Wheeler, 150 ft. due N of Pelphrey Bros.' No. 1 Wheeler, D. Ferguson Sur. .... Derrick.

Darby Petroleum Co.'s No. 6 W. H. Ritchie, E offset to A. P. Carr's No. 2 Ritchie, H. Edwards Sur. ..... T.D. 3,493 ft.; waiting on cmt.

Dearing & Sons' No. 1 Baptist Church Cemetery, 237 ft. from S and 193 ft. from E lines of lease in W. H. Castleberry Sur. ..... Location.

Joe Edgar et al's No. 2 Stinchcomb, 79 ft. N and 36.4 ft. W of most northerly SW cor. of Stanolind's Key lease, W. H. Hart Sur. ..... Moving in.

E. & F. Oil Co.'s No. 2 M. Jackson, 330 ft. from S line and center of E and W lines of 16.66-ac. lease, G. F. Pena Sur. ..... Derrick.

Faith Oil Co.'s No. 4 J. C. Barrett, B. W. Witcher Sur. .. Rig up and S.D.

S. A. Gaskill's No. 2 Godfrey, SW offset to Waggoner & McConnell's No. 1 Smith in Blk. 52, M. Dillard Sur. .. T.D. 3,610 ft.; lost hole; skidded 20 ft. NE; drlg. 3,425 ft.

Lewis Godlin's No. 1 E. L. Walker, 330 ft. N of road, 330 ft. from E line of 80.2-ac. tract, M. Dillard Sur. .... Derrick.

P. L. Hoffman's No. 3 Phillips, 330 ft. from W line and center of N and S lines of lease, D. Ferguson Sur. ..... Drlg. 2,325 ft.

E. M. Jones' No. 1 L. D. Crim, 330 ft. from N line and center of E and W lines of 10-ac. tract, M. V. Winkle Sur. ..... T.D. 3,650 ft.; shot 80 qts. 3,544-60 ft.; preparing to pump.

Jack T. Life's No. 1 B. Moore, center of 1.75-ac. lease, D. Moore Sur. ..... T.D. 3,152 ft.; S.D.

C. H. Liner, Inc.'s No. 1 A. A. King, 398 ft. W and 560 ft. S of most northerly NW cor. of Magnolia's John Radford lease in M. Tennison Sur. ..... Derrick.

Lion Oil & Refining Co.'s No. 2 Evans, S offset to Sinclair Prairie's No. 10 Williams, P. McAnnelly Sur. .. Derrick.

Magnolia Petroleum Co.'s No. 3 J. H. Beavers, 318 ft. from N line and 372 ft. from E line of lease, T. R. Raine Sur. ..... Location.

Magnolia Petroleum Co.'s No. 4 C. Jones, 330 ft. from N and W lines of lease, G. W. Hooper Sur. ..... T.D. 3,629 ft.; waiting on cmt.

J. C. Means' No. 4 W. D. Luce, SW offset to Blue Star's No. 3-G, E. L. Walker Sur. ..... Rig up.

B. F. Phillips' No. 1 League, 281 ft. N and 356 ft. E of NE cor. of Mabee's Whitehurst lease in H. F. Rogers Sur. ..... Derrick.

Pilot Oil Co.'s No. 1 Hoyt, 185 ft. due N of N line of railroad in J. Mosley Sur. ..... Location.

Rajo Oil Co.'s No. 2 Barrett, 378 ft. from N line and 330 ft. from W line of lease, B. W. Witcher Sur. .. Derrick.

Ray Drilling Co.'s No. 2 Tubbs, 150 ft. from W line of lease in D. Sanches Sur. ..... Derrick.

Sun Oil Co.'s No. 3 A. G. Norton, 330 ft. from W line of lease and 660 ft. S of No. 2, S. Baggett Sur. .... Derrick.

L. W. Tarkington's No. 1-A Mrs. A. M. Greggston, 187 ft. N of Johnston's No. 1 Greggston and center of N and S lines of lease, M. Dillard Sur. ..... Derrick.

W. C. Turnbow's No. 2 McKinley, 125 ft. N and 420 ft. E of NE cor. of Yount Lee's Harley lease, D. Sanches Sur. ..... Derrick.

HENDERSON COUNTY

American Liberty Oil Co.'s No. 1 H. Gregg, 350 ft. from S and W lines of west 55 acres of 154-ac. tract in John Spivey Sur., 4 miles N of Athens ..... Drlg. 2,500 ft.

Dr. J. T. Kennon et al's No. 1 Rowe & Baker, 1,320 ft. from N line and 150 ft. from W line of survey and tract, Josiah T. Childress Sur. ..... S.D. 920 ft.

H. H. Meyer's No. 1 M. E. Olson, 2 miles S of Brownsboro tract in NW cor. of survey, George Wilson Sur. ..... S.D. 3,900 ft.

HILL COUNTY

Graves & Rose's No. 1 Halderman, 150 ft. from N and E lines of 80-ac. lease, W of Mount Calm, A. C. Graves Sur. ..... Top Austin chalk 690 ft.; base 1,010 ft.; drlg. 1,280 ft.; clay.

Mahon et al's No. 1 McGuffey, 620 ft. from S and 150 ft. from E line of 200-ac. tract, 4 miles NE of Mount Calm, F. & N. Scrutchfield Sur. ..... T.D. 540 ft.; fishing bit.

HOPKINS COUNTY

Surgess and Sinson's No. 1 First Natl. Bank, 470 ft. N and W of SE cor. D. Buie Sur., but located in the H.E.P.&P.R.R. Sur. ..... T.D. 2,155 ft.; cleaning out.

E. P. Corley's No. 1 Jumper ..... Moving in rig; T.D. 1,630 ft

HUNT COUNTY

A. Kelsey et al's No. 1 W. R. Berry, 450 ft. from S line and 300 ft. from E line of 139-ac. tract, J. Roads Sur. ..... Location.

KAUFMAN COUNTY

Slay-Bentley-Brewer et al's No. 1 J. B. Hunter, 300 ft. from S line and 150 ft. from SE line of 500-ac. tract, 4 miles S of Terrell, R. Sowell Sur. ..... Rigging up.

LAMAR COUNTY

Doyle and Jondeau's No. 1 Martin, 990 ft. from N line and 330 ft. from E line of tract, Joseph Deck Sur. ..... Rig up; T.D. 3,446 ft.

LEON COUNTY

Alladay et al's No. 1 W. R. Thompson, 330 ft. from N line of survey and 330 ft. from E line of 98-ac. tract, N. M. Allen Sur. ..... S.D. 2,170 ft.

LIMESTONE COUNTY

C. C. Curtis et al's No. 1 Emma Daniels, 150 ft. from W line and 150 ft. from S line of 42.5-ac. tract in Pedro Varela Sur. ..... Location.

Miller Drilling Co. and Joiner's No. 1 J. A. Stephenson, 400 ft. from S line and 300 ft. from E line of lease, one-fourth mile SE of Kosse, Charles Welch Sur. .... S.D. 3,140 ft.

MORRIS COUNTY

Grover Hart's No. 1 Walcott and Lott, 250 ft. from N line and 330 ft. from E line of survey, 3 miles S of Carson, B. A. Russell Sur. ..... S.D. 1,896 ft.

Joiner & Harris Drilling Co.'s No. 1 Clayton Brown, 1,625 ft. N. of most easterly SW cor. of survey, William M. Coffey Sur. ..... S.D. 1,550 ft.

Leonard's (Tucker-Fullwood) No. 1 P. M. Staggers, 450 ft. from N line and 150 ft. from E line of 45-5-ac. tract, J. D. Nelson Sur. ..... Fishing; T.D. 3,679 ft.

NAVARRO COUNTY

R. B. Godding et al's No. 1 Lela Kelt, 450 ft. from E line and center of N and S lines of lease, 3 miles NE of Chatfield ..... Spudded and S.D.

RED RIVER COUNTY

Ajo Oil Co.'s No. 1 Nickels & Daniels, center of 8 [illegible] acres of 1,308-ac. tract, 8 miles N of English, Hugh B. Shaw Sur. ..... Bldg. derrick.

Concord Oil Co.'s No. 1 J. R. Dallahunty, 500 ft. from N of Isaac Moore Sur. and 200 ft. E of E line of Robert Glass Sur. ..... Drlg. 2,849 ft.; shale.

L. G. Priest's No. 1 R. W. Peck, 900 ft. N and 500 ft. S of southerly SE cor. of 220-ac. tract, A. Wagley Sur. ..... S.D. 1,302 ft.

ROCKWALL COUNTY

Bucanner Oil Co.'s No. 1 H. L. Lofland, center of 69-ac. tract in W. M. Bird Sur. ..... Set 10-in. csg. 120 ft.; S.D.

RUSK COUNTY

G. S. Anderson's No. 5 Frederick, 300 ft. from S line of lease and midway between Nos. 2 and 3 and N offset to Lion's No. 2 Jobe, Juan Ximenes Sur. .. Derrick.

Big Indian Oil Co.'s No. 1 Joe Lee, 172 ft. from S line and 990 ft. from W line of 24-ac. lease, Peter Tipps Sur. ..... Swabbed through tubing showed some salt water; S.D. 3,644 ft.

T. E. Castle's No. 1 R. H. Gary estate, 3,960 ft. from N line and 5,280 ft. from W line of survey, 10 miles S of Henderson, A. Latham Sur. ..... S.D. 3,812 ft.

Fair & Thompson's No. 2 Bradford, 150 ft. from N and E lines of E 16.5-ac. lease, Juan Ximenes Sur. .... Rig up.

A. P. Gary's No. 2 Redwine, center of Blk. No. 9, in Juan Ximenes Sur. ..... S.D. 2,612 ft.; chalk

Griffin & Barnes' No. 1 fee, 12 ft. from S and W lines of 2-ac. tract, J. B. De Cadena Sur. ..... Set surface csg.

Gulf Production Co.'s No. 2 H. Barton, 1,248 ft. SE along W line of lease from NW cor. of same and 330 ft. NE at right angles in Mary Cogswell Sur. .... Derrick.

Gulf Production Co.'s No. 2 W. A. Hindman, 270 ft. S and 123 ft. E from NW cor. of lease, W. W. Simms Sur. ..... Location.

Gulf Production Co.'s No. 2 W. Otem, 250 ft. from N and W lines of lease in M. McCabe Sur. ..... Location.

Harris and Russell's No. 1 T. W. Harris, 330 ft. from S line and 660 ft. from W line of most southerly SW cor. of 160-ac. tract, 3 miles SW of Henderson, W. G. Davis Sur. ..... Derrick.

Hathaway et al's No. 1 Gray, J. M. McLain Sur. ..... S.D. 3,555 ft.

H. B. W. Oil Co.'s No. 2 Redwine, 150 ft. from E line and center of Payne's No. 1 Redwine, Juan Ximenes Sur. ..... Derrick.

Hudson's No. 1 Jeff Phillips, 150 ft. from N line of survey and 640 ft. from W line of 160-ac. tract, 4 miles SE of Minden, Nepomucene Villarea Sur. .... S.D. 2,110 ft.

Humble Oil & Refining Co.'s No. 2 George Alexander, 224 ft. from S line and 737 ft. from W line of lease in T. H. Smith Sur. ..... Drlg. 3,657 ft.

Humble Oil & Refining Co.'s No. 2 C. H. Hedge, 330 ft. from N and W lines of lease, J. C. Barnett Sur. ..... Derrick.

Iotex Oil Co.'s No. 3 Tom Beall, W offset to Ward Oil Co.'s No. 2 Beall, P. W. Holmes Sur. ..... Derrick

J. Jeagen's No. 1 Needham, 330 ft. from N line of lease and 330 ft. from NE and 400 ft. from SE of survey, J. H. Chambers Sur. ..... S.D. 1,414 ft

Jordan & Ramsey's No. 1 L. W. Prior, 330 ft. from N line and 607 ft. from E line of 53-ac. lease, Walker Pettit Sur. ..... Derrick.
John Keegan's No. 1 J. C. Strong, 300 ft. from N line and 600 ft. from W line of 57-ac. lease, 8 miles NE of Henderson, John Hallam Sur. ..... Location.
Kimble & Acre's No. 1 Frederick, 150 ft. from S line and center of E and W lines of 10-ac. lease, Juan Ximenes Sur. ..... Derrick.
Malone et al's No. 1 J. S. Williams, 330 ft. from S line and 330 ft. from SE line of lease, Jessie Crawford Sur. ..... Drlg. 2,110 ft.; shale.
McMahon's No. 3 Joe Lee, 1,000 ft. E of No. 2 and center of N and S lines of lease, Peter Tipps Sur. .. T.D. 3,350 ft.; S.D.
Olson Bros.' No. 5 J. T. Brown, 200 ft. from N line and 700 ft. from W line of lease, M. J. Pru Sur. .... Derrick.
Overton Refining Co.'s No. 1 Church Lot, center of Baptist Church lot and W offset to Arrow's No. 2 Thrash in F. Cordova Sur. ..... Drlg. 2,935 ft.
Paulett et al's No. 1 Ed Sparks, 350 ft. from E, 150 ft. from S of survey, L. C. Riggs Sur. ..... S.D. 1,465 ft.
Ross Seward's No. 1 Burton, J. J. Y'Barbo Sur. ..... T.D. 3,387 ft.
Smith and Sikes' No. 2 W. H. Frederick, 150 ft. from S and E lines of 10-ac. lease, Juan Ximenes Sur. .... Top sand 3,605 ft.; swabbing; T.D. 3,675 ft.
Snyder et al's No. 2 Stewart, 174 ft. NW of No. 1 and 190 ft. SE of C. L. Archer's No. 1 J. H. Stewart, John Womack Sur. ..... Derrick.
Stanolind and Pure Oil Co.'s No. 2 W. H. Siler, 150 ft. from N line and 215 ft. from W line of W. B. Perry Sur. ..... Location.
Trico Oil Co.'s No. 1 D. Bradford, 200 ft. N of highway and 150 ft. W of most westerly creek, Juan Ximenes Sur. ..... Top sand 3,520 ft.; T.D. 3,600 ft.; waiting on cmt.
C. A. Walker's No. 1 Nealy Johnson, 330 ft. from N and E lines of 13-ac. tract, W. T. Tutt Sur. ..... T.D. 3,832 ft.; to make drill stem test.

SMITH COUNTY

Long Drilling Co.'s No. 3 G. A. Turner, D. W. Campbell Sur. ..... Derrick.
A. McCutcheon's No. 2 Temple Store, 330 ft. from W line and midway between N and S lines of lease, D. Shaw Sur. ..... Set surface csg.
M. M. Rowan et al's No. 1 Gibbons Mfg. Co., 5,900 ft. from S line and 8,050 ft. from W line of survey .... S.D. 3,610 ft.
Sinclair Prairie Oil Co.'s No. 6 Patterson, 330 ft. from N and W lines of lease, J. Vargas Sur. ..... Temp. abnd.; T.D. 3,753 ft.; moved rig off.
Sneed et al's No. 1 Church Lot, S offset to Wilford's No. 1 Cook in Juan Vargas Sur. ..... Derrick.
Sun Oil Co.'s No. 1 J. J. Denton, 330 ft. from S and W lines of lease in Juan Vargas Sur. ..... Location.
The Texas Company's No. 7-B Jarvis, 330 ft. from W line and 1,320 ft. from N line of lease, M. D. L. S. Coy Sur. ..... Moving in rig.
Thayer & Maddox' No. 1 W. P. Rushing, 330 ft. from N line and center of E and W lines of tract in Jacob Herrin Sur., 1½ miles SE of Whitehouse .... Rig up.

TITUS COUNTY

Randua Newberry et al's No. 1 First State Bank, 1,391 ft. from S and 2,410 ft. from E line of James T. Box Sur. ..... Derrick.
Perry V. Cook's No. 1 M. C. Rogers, center of SW of Moore Sur. ..... T.D. 4,212 ft.

UPSHUR COUNTY

W. C. Bentley's No. 1 Brawley heirs, 630 ft. E and 170 ft. N of NW cor. of Sun's Hargraves lease, M. Mann Sur. ..... S.D. 3,678 ft.; chalk.
Clark & Cowden's No. 3 J. W. Free, 525 ft. from S line and 250 ft. from most westerly E line of lease in D. Ferguson Sur. ..... Rigging up.
F. A. Fuller et al's No. 1 Shattesworth, 330 ft. from S and E lines of W 60 acres of 100-ac. tract, James Dunn Sur. ..... Oil sand 3,727-45 ft.; drill stem test; showed 17 fourbles salt water in 8 min.; temp. abnd.
Pat Hudson et al's No. 1 D. F. Smith, 330 ft. out of SE cor. of W 100 acres of the N 200 acres of the 272-ac. lease, 3 miles E and 1½ miles N of Cranfill & Reynolds' No. 1 Rash, John Denson Sur. ..... Waiting orders 3,710 ft.
Humble Oil & Refining Co.'s No. 6-B Eva O'Byrne, 797 ft. from E line of lease and 729 ft. from Nos. 1, 2 and 3 wells in D. Ferguson Sur. ..... Rigging up.
Humble Oil & Refining Co.'s No. 19 I. D. Smith, 938 ft. from N line and 584 ft. from W line of lease in E. A. J. Evans Sur. ..... T.D. 2,572 ft.; chalk; S.D.
Lester and Duffield's No. 4 Graves, 522 ft. from N line and 379 ft. from W line of lease in M. Irwin Sur. .... S.D. 3,005 ft.; chalk.
Lynch & McQuaig's No. 2 Mackey, 330 ft. from E line of lease and 550 ft. N of No. 1 well in S. Harrell Sur. ..... Derrick.
Magnolia Petroleum Co.'s No. 8 N. W. Blackwell, 330 ft. from E line and 472 ft. from Nos. 1 and 3 wells, H. E. Edwards Sur. ..... T.D. 3,573 ft.; waiting on cmt.
Mudge Oil Co.'s No. 8 J. W. Free, 150 ft. from S line and 330 ft. from E line of 73-ac. lease in D. Ferguson Sur. ..... Rigging up.
F. W. Merrick, Inc.'s No. 7 W. R. Nicholson, 330 ft. from N and E lines of lease in M. Mann Sur. ..... Drlg. 1,850 ft.; shale.
George Pace et al's No. 1 D. C. Shelton, N offset to C. L. Brown's No. 1 D. C. Shelton, William King Sur. ..... Drlg. 1,780 ft.; shale.
Sun Oil Co.'s No. 3 Hodnett Melton, 330 ft. from E line and 990 ft. from Nos. 1 and 2, Juan Vargas Sur. ..... S.D. 1,629 ft.
Taubel & Lyons' No. 1 W. H. Duffy, 330 ft. from N and E lines of NW 50-ac. tract, Starr Sur. ..... Top Georgetown 3,931 ft.; S.D. 3,964 ft.
Travis & Weir's No. 1 L. P. League, 230 ft. from N line and 330 ft. from W line of N 18 acres of L. P. League Sur. ..... Rig up.
Wadley and Evans' No. 1 W. S. Jones, 330 ft. from S and E lines of 100-ac. lease, James M. Dunn Sur. ... T.D. 3,690 ft.; swabbed salt water; swabbing.
Wadley & Lyons' No. 1 Hall, 150 ft. out of NW cor. of H. E. Hall 14-ac. tract, William McKey Sur. .... Temp. abnd. 3,784 ft.
Waggoner & McConnell's No. 4 Williams, 300 ft. from W line and center of N and S lines of 22-ac. lease, McKinley & Williams Sur. ..... T.D. 3,624 ft.; waiting on cmt.
J. Z. Werby's No. 3 Read, 330 ft. from S line of lease and 490 ft. W of No. 1 T. Hopkins Sur. ..... T.D. 3,634 ft.; testing csg.

VAN ZANDT COUNTY

Barton et al's No. 1 C. L. Hubbard, 600 ft. out of NE cor. of Hubbard 225-ac. tract, 3½ miles S of Canton, M. J. De Cadena Sur. ..... Drlg. 3,408 ft.; shale.
Miss Alice Holton's No. 1 A. Cain, 150 ft. from S and E lines of E 4 acres of 42-ac. tract in Nacogdoches County School Land Sur. ..... Derrick.
Kelly O. & G. Co.'s No. 1 Lemsford, center of Lemsford tract, John Conner Sur. ..... S.D. 3,300 ft.
Killum & Chisum's No. 1 J. J. Goode, 150 ft. from N line and 375 ft. from E line of lease, 5 miles SW of Van, David Rose Sur. ..... Derrick.
Lyman et al's No. 1 J. C. Stewart, 150 ft. from N line and 650 ft. from W line of 90-ac. tract, A. McPhail Sur. ..... T.D. 2,731 ft.
Peden-Olson's No. 1 W. S. Brannon, 205 ft. from N and 160 ft. from W lines of 45-ac. tract, 2¼ miles N of John Goodman Sur. ..... S.D. 1,250 ft.
Pure Oil Co.'s No. 5 J. A. Bracken, 250 ft. S of N line and 225 ft. W of E line of 69-ac. tract in John Walling Sur. ..... Derrick.
Pure Oil Co.'s No. 5 H. P. Tunnell, 580 ft. N of S line and 225 ft. W of E line of 131.5-ac. tract in James Rose Sur. ..... Rigging up.
A. C. Rowan's No. 1 W. E. Price, 150 ft. from N line and 150 ft. from W line of 28-ac. tract, John Walling Sur. ..... S.D. 2,942 ft.
Roy Stumpff's No. 1 M. L. Riggs, 160 ft. from E line and 250 ft. from S line of tract No. 2 and 330 ft. from E line of lease, 4 miles NE of Van, William Daniel Sur. ..... Rig up and S.D.
H. C. Teague et al's No. 1 C. W. Morris, 1,000 ft. from N line and 300 ft. from E line of 160-ac. tract, 5 miles SE of Ben Wheeler, C. L. Morrison Sur. .... T.D. 3,097 ft.; S.D.
Van Oil Association's No. 1 Tankersley, 200 ft. from E and 1,000 ft. from S of farm, L. Landers Sur. ..... T.D. 2,850 ft.; S.D.
C. O. Weir's No. 1 W. B. Tunnell, 150 ft. from N and W lines of lease, A. H. Wiley Sur. ..... T.D. 3,003 ft.; S.D.

WOOD COUNTY

Hull & Short's No. 1 T. H. Peterson, 600 ft. from S line and 300 ft. from E line of 320-ac. tract and survey, 4 miles E of Mineola, W. B. McNutt Sur. ..... Drlg. 2,960 ft.; shale.
Wood County Dev. Co.'s No. 1 Davis, approximately 180 ft. from S line of 160-ac. tract and 2⅛ miles S of Kantes in Sarah McDonald Sur. ..... TD. 4,458 ft.; fishing for drill stem.

Wildcat Operations in West Texas

(Continued from Page 36)

Thomas et al's No. 1 Edwards, 330 ft. from S, 2,310 ft. from E, Sec. 38, Blk. 43, Twp. 3s, T.&P. Sur. ..... T.D. 3,200 ft.
H. F. Wurts' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW Sec. 16, Blk. 46, Twp. 3s, G. M. M.Br.&A. Sur. ..... S.D. 3,605 ft.

EL PASO COUNTY

Tri-State Oil Co.'s No. 1 Bobadella, 1,325 ft. from S and E lines Sur. 254, S.F. No. 7,247 ..... S.D. 3,190 ft.; fishing 3,190 ft.

FISHER COUNTY

Cranfill & Reynolds' No. 2 George, 330 ft. from N and W lines of NE of Sec. 200, Blk. 1, B.B.B.&C. Sur. ... Rig.
Cranfill & Reynolds' No. 3 B. F. Willingham (standing since March, 1931) ..... T.D. 3,090 ft.; rigging up to deepen.
O'Donnell's No. 1 Pardue, 330 ft. from S and E lines of N half of SW Sec. 202, B.B.B.&C. Sur. ..... Drlg. 2,580 ft.
Southern Oil Co.'s No. 1 Beavers, 330 ft. from W and 660 ft. from S of S half of SW Sec. 193, B.B.B.&C. Sur. ..... T.D. 410 ft.; set 12-in. at 360 ft. and mudding.

GARZA COUNTY

F.H.E. Oil Co.'s No. 1 Stoker ..... Drlg. 2,335 ft.
Southern Oil Corp.'s No. 1 Boren, 990 ft. N, 660 ft. E, Sec. 36, Blk. 5, H.&G.N. Sur. ..... S.D. 1,680 ft.

GLASSCOCK COUNTY

R. T. Helms' No. 1 Hilger, 330 ft. from N line and 330 ft. from E line of Sec. 18, Blk. 34, Twp. 3s; T.&P. Sur. ..... Location.
Lawson's No. 2-B Edwards, 330 ft. from S and W, Sec. 16, Blk. 33, Twp. 2s, T.&P. Sur. ..... Water 2,315 ft. with increase at 2,510 ft.; 1,800 ft. water in hole; T.D. 2,625 ft., lime; underreaming 8¼-in. csg.

HOWARD COUNTY

Eppenauer et al's No. 1 Leatherwood, C of SE of NW, Sec. 25, Blk. 33, Twp. 1n, T.&P. Sur. ..... Moving in material
F.H.E. Oil Co.'s No. 1 Dodge, 336 ft. from N and E, Sec. 15, Blk. 31, Twp. 1s, T.&P. Sur. ..... T.D. 2,867 ft.; swedging 6⅝-in. csg. at 1,965 ft.; plugged back to 2,801 ft.
Myers et al's No. 1 Denman, 2,305 ft. from S and 2,320 ft. from E, Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. .... T.D. 1,503 ft.; cleaning out.
Mid-Continent Oil & Gas Co.'s No. 1 Denman, 990 ft. from S and 330 ft. from E, Sec. 10, Blk. 30, Twp. 1s, T.&P. Sur. ..... T.D. 2,813 ft; putting on pump.
Sinclair Prairie Oil Co.'s No. 4 Dodge, 960 ft. from S and 330 ft. from W, Sec. 11, Blk. 30, Twp. 2s, T.&P. Sur. ..... Drlg. 2,575 ft., lime; show oil 2,475-80 ft. and 2,522-45 ft.; oil and gas 2,550-60 ft.
Sinclair Prairie Oil Co.'s No. 5 Dodge, 2,310 ft. from N and 330 ft. from W, Sec. 11, Blk. 30, Twp. 1s, T.&P. Sur. ..... Drlg. 1,570 ft.
Southern Oil Corp.'s No. 1 Williams, 430 ft. from N and 330 ft. from W of S 123 acres of W half Sec. 43, Blk. 30, Twp. 1s, T.&P. Sur. ..... Drlg. 1,448 ft.
Jack Wallace et al's No. 1 Scott, 990 ft. from N and 330 ft. from E lines of Sec. 93, Blk. 29, W.&N.W. Sur. ..... Location.

HUDSPETH COUNTY

Patillo-Welsh's No. 1 Briggs ..... S.D. 1,135 ft.; may plug.

IRION COUNTY

Bristow et al's No. 2 Nutt, 2,550 ft. N, 1,000 ft. W, Sec. 6, Gonzales County School Lands Sur. ..... T.D. 560 ft.; fishing tools.
Straughn et al's No. 1 Kaiser, 1,930 ft. from N and 1,390 ft. from W, Sec. 69, H. Cooper Sur. ..... T.D. 1,110 ft.; underreaming csg.

JONES COUNTY

Abers et al's No. 1 Burton, 150 ft. from S and 175 ft. from E of 43.4-ac. tract in G. Martinez Sur. ..... S.D. 1,005 ft.; temp abnd.
Condor Pet. Co.'s No. 1 Holt, 1,900 ft. from S and 1,800 ft. from W, Sec. 4, Blk. 20, T.&P. Sur. ..... Cellar.
Dyer's No. 1 Odom, 200 ft. from S and 170 ft. from W of N 320 acres, G. Zumwalt Sur. ..... Moving in tools.
Johnson's No. 1 Huddleston, 165 ft. from S and W of N half of N half of Sec. 39, Blk. 18, T.&P. Sur. .... Drlg. 2,465 ft.
Smart & Reynold's No. 1 Reynolds, 2,500 ft. from N and 150 ft. from W, Sec. 2, W. T. Scott Sur. No. 3... Fishing 1,474 ft.
C. S. Spelling et al's No. 1 Lillie, 200 ft. from N and W Sec. 4, E. Miller Sur. No. 2 ..... S.D. 2,030 ft.
Southern Oil Co.'s No. 1 Swann, 1,000 ft. from E and 900 ft. from S. of I. Miley Sur. ..... S.D. 2,115 ft.
Young et al's No. 1 Harrell, 150 ft. from S and E of N half of Sec. 8, O.A.L. Sur. ..... Location

LOVING COUNTY

A. & M. Pet. Corp.'s No. 1 Wheat, 2,310 ft. SW, 990 ft. SE, Sec. 71, Blk. 1, W.&N.W. Sur. ..... Cellar.
Eppenauer Drlg. Co.'s No. 1-A Victor, 330 ft. from SW and 338 ft. from SE of NW of N half Sec. 4, Blk. 2, W.&N.W. Sur. ..... Rigging up standard tools.
Goldman et al's No. 2 Allen, 330 ft. from NW, 2,310 ft. from SW, Sec. 90, Blk. 1, W.&N.W. Sur. ..... Shut down.
Goldman et al's No. 1 Reagan-McElvain, 330 ft. from NE, 2,310 ft. from NW, Sec. 84, Blk. 1, W.&N.W. Sur.. Shut down
Lewis & Slagel's No. 1 Johnson, 330 ft. from N and 1,650 ft. from W, Sec. 6, Blk. 56, Twp. 1, T.&P. Sur... T.D. 3,299 ft., sand; S.D. for orders; show oil and ⅛ bailer sulphur water hour 3,266 ft.; increase to 750 ft. of water in 16 hrs.
Martin et al's No. 1 Wheat, 990 ft. from SW and SE, Sec. 82, Blk. 1, W.&N.W. Sur. ..... T.D. 4,007 ft.; cleaning out.
Miller et al's No. 1 Ferguson, 990 ft. from NE of Sec. 44, Blk. 29 ..... Spudded and S.D.

Thomas' No. 1 Wheat, 2,310 ft. from NW, 990 ft. from NE, Sec. 83, Blk. 1, W.&N.W. Sur. ..... T.D. 4,050 ft.; straightening crooked hole.

PECOS COUNTY

Bennett et al's No. 1 Powell, 330 ft. from SW and SE, Sec. 76, Blk. 10, H.&G.N. Sur. ..... S.D. 280 ft.

California Co.'s No. 2 Tippett, 475 ft. W and 1,296 ft. N from SW cor. of Sec. 3, Robinson Sur. ..... Drlg. anhydrite 1,075 ft.; show oil 510-17 ft.; show gas and water 540-47 ft.

Cardinal Oil Co.'s No. 3-G Tippett, 660 ft. from S and 330 ft. from E of No. 2 Tippett, Sec. 61, Blk. 194, G.C.&S.F. Sur. ..... T.D. 302 ft.

Cardinal Oil Co.'s No. 14 E. Tippett, 5,200 ft. from S and 150 ft. from W of E half of W half Sec. 40, Blk. 194, G.C.&S.F. Sur. ..... S.D. 550 ft.

Cooper et al's No. 1 Perry, 1,980 ft. N and W, Sec. 15, Blk. C-4, G.C.&S.F. Sur. ..... S.D. 802 ft.

Corvette Oil Corp.'s No. 8 H. Monroe, 1,040 ft. from E line and 150 ft. from N line of Sec. 39, G.C.&S.F. Sur., Blk. 194 ..... Location.

Humble Oil & Ref. Co.'s No. 1 White-Baker Co., 1,320 ft. from N and E lines of Sec. 44, Blk. Z, T.C.R.R. Sur. ..... Drlg. water well.

Massey's No. 1 Iowa Realty Trust, 150 ft. from NE and 1,483 ft. from NW, Sec. 31, Blk. 10 H.&G.N. Sur. .... S.D. 425 ft.

McClure et al's No. 1 Pecos Valley, 330 ft. from NW line and 330 ft. from NE line of Sec. 36, Blk. 3, H.&T.C. Sur. ..... Location.

E. J. McCurdy's No. 2 Smith, 350 ft. from N and E lines of Sec. 2, Blk. 194, G.C.&S.F. Sur. ..... Location.

Messinger et al's No. 1 Jones, 1,200 ft. from NW, 1,200 ft. from SW, Sec. 5, Blk. 9, H.&G.N. Sur ..... S.D. 1,000 ft.

Wahlenmaier et al's No. 1 Monroe, 6,060 ft. W and 330 ft. N from SE cor. of Sec. 41, Blk. 1, I.&G.N. Sur. ... Location.

Winfield et al's No. 1 Eaton, 1,170 ft. from NE and 2,490 ft. from SE, Sec. 35, Blk. 3, H.&T.C. Sur. ..... Drlg. 1,475 ft., shale.

PRESIDIO COUNTY

Sadler et al's No. 1 Bledsoe, 2,640 ft. from N and W Sec. 15, Blk. 354, G.C.&S.F. Sur. ..... S.D. 328 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 1-C University ..... S.D. 9,562 ft.

Big Lake Oil Co.'s No. 8-C University, 710 ft. from S and 2,410 ft. from E, Sec. 12, Blk. 2 ..... Drlg. 8,408 ft., shale and shells.

Big Lake Oil Co.'s No. 9-C University, 2,410 ft. from N and 766 ft. from E, Sec. 12, Blk. 2 ..... Drlg. 5,807 ft., shale and shells.

Big Lake Oil Co.'s No. 10-C University, 2,025 ft. from S and 375 ft. from W, Sec. 25, Blk. 9 ..... Drlg. 228 ft.

Continental Oil Co.'s No. 6-B University, 765 ft. from N and 1,980 ft. from W, Sec. 36, Blk. 9 ..... Drlg. 8,355 ft., lime; tested 140 bbls. oil per hour at 8,262 ft.

Continental Oil Co.'s No. 7-B University, 1,980 ft. from N and 660 ft. from W, Sec. 36, Blk. 9 ..... Drlg. 3,997 ft.

Continental Oil Co.'s No. 8-B University, 1,200 ft. from S and 1,775 ft. from W, Sec. 36, Blk. 9 ..... Drlg. 3,869 ft., lime.

J. P. Williams et al's No. 1 Scott, 1,650 ft. from N and 330 ft. from W, Sec. 179, Blk. 1, T.&P. Sur. ..... Drlg. 2,831 ft., red beds.

REEVES COUNTY

Cordova Union Oil Co. et al's No. 1 Wright, 1,320 ft. from S and W, Sec. 58, Cassell's Sur. ..... T.D. 3,718 ft.; fishing tools; hole full sulphur water 3,608-15 ft.; flowing sulphur water 3,675-96 ft.

McDorman et al's No. 1 Ray Roberts et al, 2,310 ft. from S and E lines of Sec. 32, Blk. 59, P.S.L. Sur .. S.D. 2,025 ft.

RUNNELS COUNTY

Anderson's No. 1 James, 330 ft. from N and W lines of Subd. 20 in Norvell & Travis Sur. No. 533 ..... Location.

Dutton et al's No. 1 Dean, 3,470 ft. from NE and 1,048 ft. from NW in J. Heil Sur. No. 519 ..... S.O. 3,417-20 ft.; S.D. 3,490 ft

John Castor's No. 1 Hall, 330 ft. from S and W, Sec. 149, E.T.R.R. Sur. ..... Spudded.

SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, C Sec. 29, Blk. M, G.H.&S.A. Sur. ..... T.D. 5,410 ft.; fishing at 5,250 ft.

Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,302 ft. from E of Sec. 77, Blk. LL, T.C. Sur. ..... T.D. 6,170 ft.; drlg. up baller.

George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,670 ft. from W, G.H.&S.A. Sur. ..... S.D. 5,053 ft

SCURRY COUNTY

G. E. Dickman et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, H.&T.C. Sur. ..... S.D. 5,100 ft.

M. Z. Dibble et al's No. 1 Carruthers, 2,310 ft. from N and W lines of Sec. 121, Blk. 97, H.&T.C. Sur. ..... S.D. 240 ft.

W. S. Guthrie's No. 1 Clarkson, 1,320 ft. from S and W, Sec. 242, Blk. 97, H.&T.C. Sur. ..... Drlg. 2,890 ft., lime; small show gas at 2,890 ft.

Heinzleman et al's No. 1 Hood, 436 ft. from N and 439 ft. from E, Sec. 87, Blk. 3, H.&T.C. Sur. ..... T.D. 1,150 ft.; fishing U.R. lugs.

Scurry County Oil Exchange's No. 1 Earnest, 2,310 ft. from N and W, Sec. 68, Blk. 3, H.&G.N. Sur. ..... Spudded and S.D.

Seifert & Dibble's No. 1 T. M. Blackburn, 2,310 ft. from N and 2,310 ft. from W line of Sec. 153, Blk. 97, H.&T.C. Sur. ..... S.D. 4,992 ft.

STERLING COUNTY

Fullick & Johnson's No. 1 Davis, 990 ft. from S and 660 ft. from E, Sec. 7, Blk. 13, S.P. Sur. ..... Drlg. 125 ft.

TAYLOR COUNTY

Urban's No. 1 Blair, 1,500 ft. from S and 150 ft. from W of NE 198 varas Guadalupe County School Lands, Lot 21 ..... Show oil and gas 2,315-21 ft.; S.D. 2,335 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 158, Blk. D, M-K-T Sur. ..... S.D. 2,269 ft.

Briggs & McPhee's No. 1 Kerr, 1,800 ft. E and 790 ft. S of NW cor. Sec. 18, Blk. 5-D, M.K.&T. Sur. ..... S.D. 800 ft.

Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Georgetown Ry. Sur. ..... S.D. 2,150 ft.

Miller Bros.' No. 1 Allison & Burke, C NW Sec. 10, Blk. 176, T.&P. Sur. ..... S.D. 120 ft.

Mid-Kansas Oil & Gas Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S, Sec. 26, Blk. 161, G.C.&S.F. Sur. S.D. 6,120 ft.

Jones et al's No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&R.G.N.G. Sur. ..... S.D. 2,545 ft.

Sides et al's No. 1 Phelps, 2,157 ft. from N and 2,482 ft. from W, Sec. 5, G. W. Hurley Sur. ..... T.D. 3,530 ft.; S.D. for repairs.

TOM GREEN COUNTY

Belding & Dutton's No. 1 Norsworthy, 1,640 ft. from S and 587 ft. from E of John McNeese Sur. ..... S.D. 760 ft.; S.O. and gas 725 ft

Hancock et al's No. 1 Reed, 330 ft. N and 1,676 ft. W of SW cor. of C. Schoner Sur. but in Mason & Perry Subd. No. 39 ..... Moving in material.

Mintex Oil Co.'s No. 1 Campbell Est., 446 ft. from S and 630 ft. from W of Sec. 180, Dist. No. 11, S.P. Sur. .... S.D. 1,994 ft.

Pratt & Hancock's No. 2 Lewis, 100 ft. N and 330 ft. E of most northerly SW cor. of Joshua S. Grant Sur. No. 2 ..... S.D. 200 ft.

UPTON COUNTY

Gulf Prod. Co.'s No. 102 McElroy, 1,320 ft. from S and W, Sec. 189, Blk. F, C.C.S.D.&R.G.N.G. Sur. ..... Drlg. 2,873 ft., lime; show oil 2,800-05 ft.; show oil 2,835, 2,845-55 and 2,875 ft.; 150 ft. oil in hole.

VAL VERDE COUNTY

Couch et al's No. 1 J. P. Yoas, 1,300 ft. from the N line and E line of Sec. 31, Blk. 1, I.&G.N. Sur. ..... S.D. 400 ft.

O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. ..... S.D. 6,780 ft.

WARD COUNTY

Abell Bros.' No. 2 Sloan, 990 ft. from NE and NW, Sec. 24, Blk. 5, H.&T.C. Sur. ..... Drlg. 2,200 ft.; est. 250,000 ft. gas from 2,125-35 ft.

Atlantic-Penn's No. 2 Bennett, 330 ft. from SE line and 2,310 ft. from SW line of Sec. 16, Blk. 34, H.&T.C. Sur. ..... Drlg. 262 ft.

Atlantic Oil Prod. Co.'s No. 1 Johnson, 330 ft. from NW and 2,310 ft. from NE, Sec. 9, Blk. 34, H.&T.C. Sur.... Drlg. 1,325 ft.

Atlantic Oil Prod. Co.'s No. 2 Johnson, 990 ft. from NW and 2,310 ft. from NE, Sec. 9, Blk. 34 ..... Drlg. 2,015 ft.

Atlantic Oil Prod. Co.'s No. 1 University, 330 ft. S and E, Sec. 3, Blk. 16 ..... T.D. 2,438 ft.; fishing for bit.

Atlantic Oil Prod. Co.'s No. 1 Blank-Camp, 1,320 ft. from NW and SW Sec. 14, Blk. 34, H.&T.C. Sur. ..... T.D. 2,884 ft., sand; 1,400 ft. sulphur water 36 hrs. 2,880-84 ft.; shot 120 qts. 2,705-2,730 ft.; no results; to shoot again.

Barnsdall Oil Co.'s No. 5 Henry, 1,650 ft. from NE and 330 ft. from SE, Sec. 28, Blk. B-29, P.S.L. Sur. ..... 25,000,000 ft. gas 2,114-28 ft.; T.D. 2,185 ft.; S.D.

Bradford's No. 1 Carson, 1,650 ft. from SE and 990 ft. from NE Sec. 26 ..... T.D. 2,020 ft.; cmtd. 8¼-in. csg.

Bradford's No. 1 Beatty, 1,650 ft. from NW and 330 ft. from SW, Sec. 3, Blk. 34, H.&T.C. Sur. ..... Material on ground.

Bundy et al's No. 1 Bennett, 2,310 ft. from NW and SW Sec. 16, Blk. 34, H.&T.C. Sur. ..... T.D. 2,608 ft.; S.D.

Eastland Oil Co.'s No. 2 Grimes, 495 ft. from NE and 440 ft. from SE, Sec. 14, Blk. 34, H.&T.C. Sur. ..... Location.

Eastland Oil Co.'s No. 3 Weiss, 954 ft. from NW and 284 ft. from NE of Sec. 4, Blk. 34 ..... S.D. 2,385 ft.; flowing 75 bbls. per day; to tube.

Eppenauer's No. 1 Purcell, 365 ft. from SW and 1,650 ft. from SE of Sec. 17, Blk. 14, H.&T.C. Sur. ..... T.D. 2,740 ft.

Eppenauer Drlg. Co.'s No. 1 University, 330 ft. from N and 440 ft. from E of S half of Blk. 16 ..... Material on ground; machine.

Gerber O. & G. Co.'s No. 1 Stubbs, 330 ft. from S, 990 ft. from W, Sec. 9, Blk. 3, B.&B. Sur. ..... Cellar.

Graham Corp.'s No. 1 Bennett, 2,310 ft. from NE line and 330 ft. from SE line of Sec. 16, Blk. 34, H.&T.C. Sur. ..... Location.

H. V. Greer's No. 14 Carr, 150 ft. from NW and 510 ft. from SW, Sec. 12, Blk. 5, H.&T.C. Sur. ..... S.D. 2,223 ft

Gulf Prod. Co.'s No. 14 Hutchings, 330 ft. from N and W of Sec. 9, Blk. O ..... T.D. 2,739 ft.; plugged back 2,695 ft.; shot 120 qts. 2,472-2,552 ft.; bailing and swabbing 40 bbls. oil and 22 bbls. water per day.

Gulf Prod. Co.'s No. 16 Hutchings, 1,932 ft. from S and 1,650 ft. from W, Sec. 5, Blk. F ..... Drlg. 1,250 ft.

Gulf Prod. Co.'s No. 24 O'Brien, 3,347 ft. N, 330 ft. E. Sec. 16, Blk. F ..... T.D. 2,700 ft.; flowing 140 bbls. oil daily.

Gulf Prod. Co.'s No. 29 O'Brien, 990 ft. N of SW cor., Sec. 6, Blk. F ..... Location.

Kregie et al's No. 1 Reasler, 3,062 ft. from SE, 330 ft. from NE, Sec. 46, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,050 ft., anhydrite.

Magnolia Pet. Co.'s No. 1 Brillhart, 2,310 ft. from NW and SW, Sec. 12, Blk. 34, H.&T.C. Sur. ..... T.D. 2,516 ft., red beds; to test.

Maxwell's No. 1 Smith, 330 ft. from NW and SW, Sec. 24, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,774 ft., lime.

Moran et al's No. 1 Reynolds, 170 ft. from SE and SW of NW 80 of NE half Sec. 12, Blk. 5, H.&T.C. Sur. .. T.D. 990 ft.; S.D. for casing.

Penn Oil Co.'s No. 1 Hardage-Wilson, 330 ft. from NE and SE Sec. 11, Blk. 34, H.&T.C. Sur. ..... T.D. 2,620 ft.; shot 60 qts. 2,405-35 ft. and 40 qts. 2,462-76 ft.; 70 bbls. per day before shot; ran 6-in. liner 2,300-2,520 ft.; flowing 55 bbls. oil daily.

Prince Bros.' No. 2 Hall-Roberts, 1,470 ft. from NE and 2,300 ft. from NW, Sec. 14, Blk. 34, H.&T.C. Sur. .... S.D. 920 ft.; lost returns.

Rector Oil Co.'s No. 1 Monroe, 660 ft. from NE and SE, Sec. 62, Blk. 33, H.&T.C. Sur. ..... S.D. 4,150 ft.

Rowan & Nichols' No. 1 Street, 990 ft. from SE and 330 ft. from NE, Sec. 17, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,305 ft., lime.

Southern Oil Co.'s No. 1 Sloan, 1,650 ft. from NE and 330 ft. from NW, Sec. 24, Blk. 5, H.&T.C. Sur. ..... T.D. 2,094 ft., lime; to run tubing.

Stanolind Oil & Gas Co.'s No. 1 Whitlock, 495 ft. NE, 2,200 ft. SE, Sec. 14, Blk. 34, H.&T.C. Sur. ..... T.D. 2,515 ft.; plugged back to 2,470 ft.; shot 80 qts. 2,431-61 ft.; bailed 8 bbls. water and shut down.

Strum-Simms' No. 3 Jones ..... Old well to drill deeper; rig up.

Sturm et al's No. 4 Jones, 2,310 ft. from SW and 990 ft. from SE Sec. 25, Blk. B-29, P.S.L. Sur. ..... Drlg. 2,591 ft., sand.

T. P. Coal & Oil Co.'s No. 7 James, 1,320 ft. from SW and SE, Sec. 5, Blk. 34, H.&T.C. Sur. ..... Tested 7,000,000 ft. gas; tools stuck; drlg. 2,360 ft., sand and lime.

Thompson's No. 1 Johnson, 2,310 ft. from SW and 330 ft. from NW, Sec. 9, Blk. 34, H.&T.C. Sur. ..... T.D. 2,351 ft.; tools in hole; S.D.

WINKLER COUNTY

Colonial Oil Co.'s No. 1 State vacancy, 330 ft. E and 103 ft. N of NW cor. Sec. 2, Blk. 77, P.S.L. Sur. ..... Drlg. 2,055 ft.

Richardson et al's No. 1-B Scarborough, 990 ft. from S and 1,980 ft. from E, Sec. 18, Blk. 74, P.S.L. Sur. .... Est. 3,000,000 ft. gas at 2,640 ft.; T.D. 2,661 ft.; fishing tools.

Sid Richardson's No. 1-C Scarborough, 1,650 ft. from S and 990 ft. from W lines of Sec. 5, Blk. C-22, P.S.L. Sur. ..... T.D. 3,030 ft., lime; fishing tools.

Wildcat Operations in Texas Panhandle

Week Ending March 6

CARSON COUNTY

Company, well, farm name, section and block—	Remarks:
Panhandle Rfg. Co.'s No. 1 Kirby, 1,320 ft. N and W, Sec. 183, Blk. 3, L.&G.N. Sur.	7,000,000 ft. of gas at 2,520 ft.; drlg. 2,685 ft.
Texas Interstate P. L. Co.'s No. 1 Burnett, 1,333 ft. N, 2,675 ft. E of N¼ Sec. 97, Blk. 5, I.&G.N. Sur.	Drlg. 2,379 ft.
Texoma Nat. Gas. Co.'s No. 1 Gores, 1,320 ft. from S and 1,327 ft. from E lines of SE Sec. 43, Blk. 4, I.&G.N. Sur.	Rig.
Union Pet. Co.'s No. 2 Cooper, 330 ft. N, 310 ft. E SE, Sec. 5, Blk. 9, I.&G.N. Sur.	Bldg. rig.

CHILDRESS COUNTY

Robertson's No. 1 Biddy, center S 26½ acres of N, Laughlin Sur. Blk. T	Rig.

COLLINGSWORTH COUNTY

Kates et al's No. 1 Hickman, center NE, Sec. 43, Blk. 10, H.&G.N. Sur.	T.D. 3,125 ft; hole full wtr.; to abd.
Kates et al's No. 1 Bell, 200 ft. from N, 2,310 ft. from W, Sec. 21, Blk. 102, H.&G.N. Sur.	S.D. 2,703 ft.
Tittle, Cochran et al's No. 1 Boyles, 150 ft. S and E of Sec. 90, Blk. 14, H.&G.N. Sur.	Crooked hole 145 ft.

DEAF SMITH COUNTY

Western Union Oil Co.'s No. 1 Farwell, C NW, Sec. 18-3n-2e	S.D. 1,240 ft.

GRAY COUNTY

Baldridge et al's No. 1 Melton, 330 ft. from NE E half NE, Sec. 95, Blk. B-2, H.&G.N. Sur.	S.D. 3,075 ft.; T.P. 2,913 ft.; 40 bbls.; to make 5-day test.
Baldridge et al's No. 1 Catlin, 330 ft. S and E of E 80 of 158-ac. tract, Sec. 57, Blk. 3, I.&G.N. Sur.	T.P. 3,090 ft; T.D. 3,160 ft; swbd. 500 bbls. in 6 days.

Back & Barber's No. 1 Back, 660 ft. from S, 330 ft. from W, Sec. 140, Blk. 25, H.&G.N. Sur. ..... S.D. 2,428 ft.
Baldridge O. Co.'s No. 1-B Melton, 330 ft. from N and E of SW, Sec. 95, Blk. B-2, H.&G.N. Sur. ..... T.D. 1,815 ft; straightening hole.
Gordan Burch's No. 1 Laugham, 990 ft. S, 330 ft. E. Sec. 1, W½ NE, Sec. 1, Blk. B-2, H.&G.N. Sur. ..... T.D. 2,506 ft; rebuilding burned rig; est. 15,000,000 ft. gas.

Cantone Oil Co.'s No. 2 Morse, 330 ft. from N, 330 ft. from E line, Blk. 9-A, Sec. 15, H.&G.N. Sur. ..... Location.
Christy's No. 1 Gethings, 330 ft. from N and E, Sec. 13, Blk. A-9, H.&G.N. Sur. ..... S.D. 1,760 ft.
Sam Danner's No. 1 Cobb, 330 ft. S and W NE, Sec. 165, Blk. 3, L&G.N. Sur. ..... T.D. 2,615 ft; U.R. 8¼-in. csg.
Dolomite Prod. Co.'s No. 1 Sallor, 330 ft. N and E, Sec. 111, Blk. 3, L&G.N. Su. ..... Drlg. 2,568 ft.
Gerber O. & G. Co.'s No. 1 Stubbs, 330 ft. from S, 990 ft. from W, Sec. 9, Blk. 3, B.&B. Sur. ..... Rig.
Gray County Prod. Co.'s No. 1 Huselby, 330 ft. from S and W. E½ NW, Sec. 55, Blk. 25, H.&G.N. Sur. ..... S.D. 2,782 ft.
Mazda-Shell's No. 4 Coombs-Worley, 990 ft. from N line 330 ft. from E line, Sec. 35, Blk. 3, L&G.N. Sur. .. Rig.
Ochiltree et al's No. 1 Hughey, 360 ft. S, 330 ft. E E half SE, Sec. 129, Blk. 3, L&G.N. Sur. ..... T.D. 3,257 ft; T.P. 3,170 ft; shot with 100 qts. from 3,170-3,240 ft.; fishing.

Parton & Holt's No. 2 Morse, 330 ft. from W, 250 ft. from N. W½ SW, Sec. 5, Blk. 26, H.&G.N. Sur. ..... S.D. 2,635 ft; to shoot.
Parton Holt's No. 4 Morse, 660 ft. from N and E of E half SW, Sec. 5, Blk. 26, H.&G.N. Sur. ..... S.D. 2,680 ft; no increase since 2,575 ft.

Peterson & Holt's No. 1 Gething, 330 ft. from S and W of N½ SE Sec. 13, Blk. 9-A, H.&G.N. Sur. ..... Bldg. derrick.
Phillips Pet. Co.'s No. 1 Davidson, 330 ft. N and W, Sec. 86, Blk. B-2, H.&G.N. Sur. ..... T.D. 3,063 ft; T.P. 3,013 ft; shot with 180 qts. from 2,990-3,060 ft.; to test.

Quicksand Oil Co.'s No. 2 Chapman, 165 ft. N, 775 ft. from E of W 60 ac. of N½ NW, Sec. 69, Blk. 25, H.&G.N. Sur. ..... T.D. 2,725 ft; flowed 500 bbls. first 24 hrs.

Saunders et al's No. 2 Sullivan, 822 ft. from W, 231 ft. from NE, 160 ft. S, 264 ac. of N½, Sec. 136, Blk. 3, I.&G.N. Sur. ..... Will plug back to 3,275 ft and shoot.

Sinclair Prairie Oil Co.'s No. 1-E Combs-Worley, 330 ft. from S and E, Sec. 34, Blk. 3, L.&G.N. Sur. ..... Drlg. 1,930 ft.
Skelly Oil Co.'s No. 1 C. That, 330 ft. from S line, 330 ft. from W line, SW Sec. 1, H.&G.N. Sur., Blk. 1. ... Drlg. 1,445 ft.
Skelly Oil Co.'s No. 1 Gething, 990 ft. from S and W of Sec. 48, Blk. 9-A, H.&G.N. Sur. ..... T.D. 2,720 ft; 600 ft. oil in hole from 2,687-2,700 ft; to shoot.

Skelly Oil Co.'s No. 3-A South Jackson, 330 ft. N, 1,050 ft. E, Sec. 88, Blk. B-2, H.&G.N. Sur. ..... T.D. 3,115 ft.; pay 3,108-15 ft.; putting on pump.

Sun Oil Co.'s No. 1-B Combs-Worley, 330 ft. S and E of SW Sec. 34, Blk. 3, L&G.N. Sur. ..... Drlg. 1,500 ft.
Tedesco-Bell O. & G. Co.'s No. 4 Morse, 990 ft. N and W SE, Sec. 1, Blk. 26, H.&G.N. Sur. ..... Rig.
The Texas Co.'s No. 1 Gethings, 330 ft. from S line, 330 ft. from W line, S½ Sec. 47, Blk. 9-A, H.&G.N. Sur... T.D. 2,905 ft.; P.B. to 2,800 ft.; shot with 120 qts. 2,727-98 ft.; pumped 115 bbls. in 15 hrs.

Paul Tharp's No. 1 Short, 330 ft. from N and W of Sec. 2, Blk. 1, H.&G.N. Sur. ..... T.P. 2,968 ft; T.D. 3,070 ft; S.D. for connection.

L. L. Travis et al's No. 1 Crossman, 990 ft. W, 330 ft. S of W½ Sec. 97, Blk. B-2, H.&G.N. Sur. ..... Bldg. rig.
Sam Travis' No. 1 Back, 330 ft. S and E E half NE, Sec. 44, Blk. 25, H.&G.N. Sur. ..... T.D. 205 ft.; ran 12½-in. csg.
Warner Oil Co.'s No. 1 Webb, 660 ft. from S and W of W 80 of N½ Sec. 42, Blk. 25 ..... Rig.
Weltzel Oil Co.'s No. 2 Morse, 330 ft. from S and E of N half NW, Sec. 67, Blk. 25, A.&G.N. Sur. ..... T.D. 2,675 ft.; plugged back to 2,285 ft.; to set csg.

HEMPHILL COUNTY

Hoover's No. 1 Hoover, 350 ft. from N, 1,200 ft. from E, G. S. Hood Sur. ..... T.D. 5,250 ft.; S.G. 5,245 ft.

HUTCHINSON COUNTY

Alexander's No. 1 Cockrell, 330 ft. N and E of E 80 of S 160, Sec. 3, Blk. M-2, T.C. Sur. ..... T.D. 2,990 ft; 100 ft. oil in hole from 2,988-90 ft.

Danciger O. & R. Co.'s No. 1 Johnson, 330 ft. N and W, SE, Sec. 34, Blk. Y, A.&B. Sur. ..... Spudded and S.D.
Deal O. & G. Co.'s No. 2 Sanford, 330 ft. N and E of N 80 ac., S 160 ac., Sec. 81, Blk. 46, H.&T.C. Sur.... S.D. 450 ft.
Huber Pet. Co.'s No. 1 Moyer-Johnson, 990 ft. from N, 330 ft. from E half SW, Sec. 34, Blk. Y, A.&B. Sur. ..... S.D. 3,004 ft.
Huber Pet. Co.'s No. 1 Works, 1,342 ft. from S and 1,813 ft. from E, Sec. 7, Blk. Y-2, T.T. Sur..... Est. 20,000,000 to 25,000,000 ft. gas; drlg. 2,539 ft.

Liner Drlg. Co.'s No. 1-D Johnson, 330 ft. from N and E, Sec. 6, Blk. 1, B.&B. Sur. ..... T.D. 3,146 ft.
Joe Murphy's No. 1 Watkins, 440 ft. from N and W of N half, Sec. 13, Blk. M-21 ..... T.P. 2,923-60 ft; T.D. 2,964 ft; no test yet made.

Pharis Oil Co.'s No. 5 Smith, 660 ft. from N and W, SW. Sec. 14, Blk. Y, M.&C. Sur. ..... Shut down.
H. Steckol's No. 1 J. A. Whittenburg (Amerada), 430 ft. from S line, 990 ft. from W line, Sec. 37, T.C.R. R. Sur. ..... Drlg. 2,382 ft.
Texlvania Oil Co.'s No. 1 Halle, 330 ft. S, 250 ft. W, Sec. 16, Blk. 1, E.L.R.R. Sur. ..... T.D. 2,105 ft; pipe parted.

LIPSCOMB COUNTY

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... T.D. 5,003 ft.

MOORE COUNTY

Canadian River Gas Co.'s No. 2-A Perkins, 3,250 ft. S of most northerly NE cor, 200 ft. W of E line, Sec. 54, Blk. 47, H.&T.C. Sur. ..... T.D. 1,012 ft; cmtd. 12½-in. csg.
Dogie Oil Co.'s No. 1 Greenwald, 330 ft. from N and W, Sec. 277, Blk. 44, H.&T.C. Sur. ..... S.D. 2,500 ft.
Shamrock Oil & Gas Co.'s No. 1 Burnett, 660 ft. from S, 330 ft. from W, Sec. 359, Blk. 44, H.&T.C. Sur. .... Drlg. 4,035 ft; 1,200 ft. wtr. in hole from 4,012 ft.

MOTLEY COUNTY

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur. ..... S.D. 530 ft.

OLDHAM COUNTY

Chambers et al's No. 1 Herring, CNL Sec. 20, Blk. 8, G.C.&S.F. Sur. ..... S.D. 4,000 ft.

ROBERTS COUNTY

Chicken Creek Oil Co.'s No. 1 Ledrick, 330 ft. N and W, Sec. 55, Blk. C, G.&M. Sur. ..... Drlg. 4,991 ft.

WHEELER COUNTY

Delaney et al's No. 1 Sitter, 330 ft. from S and W of E half NE, Sec. 33, Blk. 24 ..... Est. 15,000,000 ft. gas; S.D. 2,711 ft.

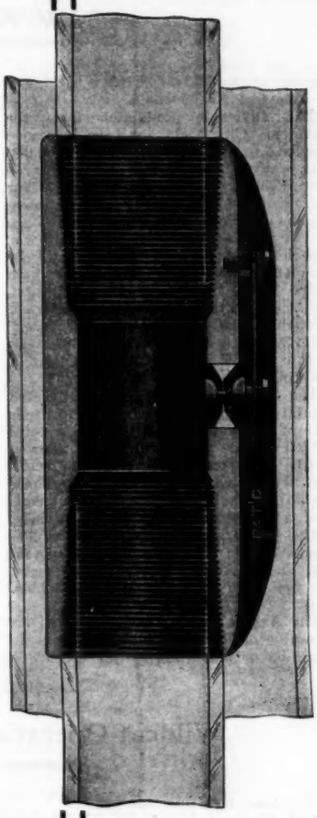
Devore & Robinson's No. 1 Sitter, 2,310 ft. from S and E, E½, Sec. 33, Blk. 24, H.&G.N. Sur. ..... T.D. 2,760 ft.; S.D. for pipe line connection.

Helena O. & G. Co. et al's No. 1 Belew, C NE SW, Sec. 50 ..... Drlg. 220 ft.
Osborne et al's No. 2 Sloss & Admire, 330 ft. from N line and 1,530 ft. from E line of NE Sec. 47, H.&T. C. Sur., Blk. 18 ..... S.D. 800 ft.
B. M. Rhodes' No. 1 Noel, 330 ft. S and E NE, Sec. 54, Blk. 24, H.&G.N. Sur. ..... Rigged up.
Rogers & Harner's No. 1 J. O. Clark, 990 ft. S and W of Sec. 6, Blk. 24, H.&G.N. Sur. ..... Rig.

NEW METHOD

of bringing in . . . .

WELLS



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The P & T Kick-Off Unit is made to fit any standard A. P. I. tubing, size 2", 2½" or 3", they are ordinarily placed at 300 foot intervals in the fluid. The two Types of P & T Kick-Off Units, Internal and External permit the flow of the well to be governed before bringing in. The STANDARD TWO WAY Unit is preferable in most fields. All types have proven their ability to increase production at lower cost with increased safety.

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Governor Shuts In Oklahoma City Field, Charging Some Companies Greatly Overproducing

By W. A. SPINNEY
Staff Correspondent, Oklahoma Fields

The governor of Oklahoma, by executive order, shut down the Oklahoma City Field and put it under military rule on Saturday afternoon, March 4. This drastic step was necessary to curb the overproduction of oil and the waste of gas.

The governor shut down the field on August 4, 1931, and it lasted until October 10, because of the low price of crude oil.

The second shutdown is due to the alleged overproduction of some of the wells in the field. According to the governor, one company produced approximately 230,000 bbls. of oil the first three days of March and was still producing at the rate of 3,000 bbls. an hour. The shutdown followed a period of excessive overproduction on the part of a number of operators in the field. Some companies were taking their March allowables early in the month.

The lifting of the shutdown depends upon the action of the state legislature. A new proration bill is expected to be introduced in the house of representatives early in the week. Estimates on how long the shutdown will last range from two weeks to a month or until a new proration law has been passed.

Colonel Murray in Charge

Col. Cicero I. Murray, who was in charge of the first shutdown, is in charge of the present one. He has been in complete charge of proration enforcement in the Oklahoma City Field since June 21, 1932.

The only wells that are allowed to produce at this time are gas wells and oil wells making 10 per cent or more water. Production was brought to a standstill over Sunday. On Monday the water wells in the field were expected to be permitted to produce 100 bbls. daily plus the percentage allowable. This is expected to result in the field producing around 24,000 bbls. daily, but if the percentage allowable is eliminated the output is expected to be held to around 12,000 bbls. daily.

According to the military enforcement department there are three water wells in the Wilcox sand zone, 105 "water" wells in the Simpson sand zone, and each are to get a 100-bbl. per day allowable in addition to the percentage allowable. The Siliceous lime zone will continue to produce to capacity. It is estimated to have made a daily average of 445 bbls. during the month of February. There is expected to be a small amount of oil production from the gas wells not included in the order.

The gas wells will be permitted to produce to allow continuous operation of the gasoline plants and to meet the fuel demand for field drilling operations and from outside purchasers.

The operations of the pipe lines will not be restricted and the crude oil now in storage may be shipped. Production and pipe line shipments for the first three days of the month will be checked during the next few days to determine whether there has been any overproduction and how much oil has been moved from the field. Some estimate that the daily production of the Oklahoma City Field was in excess of 250,000 bbls. daily.

The allowable production from the Oklahoma City Field has been increased previous to the shut down order 60,000 bbls. daily during the month of March over February. The total allowable for March is 152,769 bbls. The Wilcox sand zone is allowed a total of 104,218 bbls. or 2.6 per cent of its potential. It was expected that eight new wells will be completed during the month of March to which 1,561 bbls. have been allocated daily. The 38 minimum wells are allowed 1,140 bbls. daily and the three "water" wells 300 bbls. daily. There are 394 wells in this classification with a potential of 3,934,025 bbls. daily.

The Simpson sand zone was allocated a total of 47,561 bbls. daily or 5.7 per cent of the potential. There are a total of 101 water wells which are allowed 10,100 bbls. daily; 79 minimum wells that are allowed 2,490 bbls. daily. There are 337 wells in the Simpson sand zone with a potential of 624,359 bbls. daily.

The Fault Lime zone is allowed 235 bbls. daily, or 5.7 per cent of its potential. There are four minimum wells and one well with a potential of 1,983 bbls. daily.

The Arbuckle lime zone was given an allowable of 755 bbls. daily. There is no proration or potentials in this zone. The daily average production for the first 20 days of February was 433 bbls. and there is some question as to whether this zone will be able to make its allocated amount to meet the pipe line demand.

Big Production in First Week

Production from the Oklahoma City Field is expected to reach a high figure in the first four or five days of March. This is due to the fact that a majority of the operators desire to get out their entire March allowables. It is believed that in doing this millions of feet of gas was being blown into the air as the volume is more than the gasoline plants can handle and the market for gas is still negligible.

The mandate in the State Supreme Court case of the H. F. Wilcox Oil & Gas Co. was handed down March 3. It is believed that this decision leaves many if not all of the Oklahoma Corporation Commission's orders invalid, but the commission still has sufficient power under the 1915 proration law to control the situation. The commission to date has delayed making a new set of rules and regulations for its procedure because of the impending proration bill before the legislature. Should the legislature fail to pass a new law, the Corporation Commission can strengthen its position by a few general orders and in that manner proceed to handle the proration situation.

There is also an agreement among the major purchasing companies not to accept or purchase oil produced in excess of the state allowables. Some of the pipe line companies have already notified their connections of this condition. Thus the outlet for oil that is not produced according to the State's allowable from a few of the flush areas in the country is limited.

The members of the Corporation Commission instructed the commission's attorney to prepare a course of procedure, in comformity with the opinion of the State Supreme Court in the Wilcox Oil & Gas Co.'s case. The chief criticism of the court was the lack of fixed procedure for holding hearings and making orders.

Commission Hearings

The corporation commission continued the hearing on the complaint against the Clark Pipe Line Co. on tariffs, until April 4. The complaint was filed by Edward Hirsh, a royalty owner, alleging 10 cents a barrel, assessed as a gathering charge by the Clark Pipe Line Co. was applied to the producer and royalty owner alike.

On the basis of this complaint the commission called representatives of all the pipe line companies in the field to determine whether the charge was unreasonable. No evidence was forthcoming at the last hearing since it developed that a number of companies in the field had not filed tariffs with the commission.

Hayes McCoy, attorney for the Empire Pipe Line Co., asked continuance of the case, and stated to the commission that his company had a uniform 2-cent a barrel gathering charge.

Notice will be served on all pipe line and transportation companies in the Oklahoma City Field to immediately file tariff schedules with the commission, and that a general hearing will be held on April 4.

Charges of overproduction against the Wirt Franklin Petroleum Corp. and Eason Oil Co. has been continued until the April 4 session. Petition of the Sunray Oil Co. to produce approximately 285,000 bbls. of oil from its three leases in the Oklahoma City Field, was dismissed at the hearing March 3. Hearing of the petition of Anderson-Prichard Oil Corp. and T. B. Slick estate, for the shutting down of the Oklahoma City Field was continued to March 14.

Southern Developments

In the Tatums Pool, in Carter County, the Dapfine Oil Co.'s No. 1 Majors, NE cor. SE SE, Section 25-1s-3w, which was completed last November for 400 bbls. a day, was drilled deeper from 2,501 feet to 2,590 feet in sand series topped at 2,419 feet.

G. L. Pace's No. 2 Mitchell, SW cor. NW NW, Section 30-1s-2w, found sand at 2,095-2,102 feet and was drilling deeper at 2,375 feet.

Two shallow producers were completed in Jefferson County. The Farlyn Oil Co.'s No. 2 Seay, NE cor. NW SW SE, Section 3-7s-5w, pumped 75 bbls. the first 24 hours from sand at 1,195-1,252 feet. The Bridwell Oil Co.'s No. 2 Wohlgemuth, SE cor. NE NW, Section 30-6s-5w, pumped 35 bbls. from sand at 1,482-1,520 feet.

In Stephens County, McNeill and Newsom's No. 1 Newsom, SE cor. NE, Section 14-2-5w, south of the Carter-Knox Field, found a showing of oil in sand at

Wildcat Operations in Oklahoma

Northern Oklahoma

ALFALFA COUNTY

Company, farm and location—	Remarks
Acre et al's No. 1 Acre, C SW NE Sec. 14-24-11w	O.W.D.D; T.D. 5,502 ft; started reaming.

ATOKA COUNTY

George's No. 1 Reddin, SW NE SW Sec. 19-1-15	S.D. 640 ft.

BECKHAM COUNTY

Pattel Royalty's No. 1 Goose Tree, SW SE SW SE Sec. 32-10-23w	S.D. 2,092 ft.
Mid-Texas Co.'s No. 1 Sidell, NE cor. SW SW Sec. 17-23-22w	S.D. 2,550 ft.
White et al's No. 1 Green, SW cor. Sec. 34-10-24w	S.D. 2,575 ft.

BLAINE COUNTY

Watonga Petroleum Co.'s No. 1 Masters, SW NW NW, Sec. 27-16-11w	S.D. 1,305 ft.

CADDO COUNTY

Denver P. & R. Co.'s No. 1 Noe, NW SW SW Sec. 34-10-10w	Drlg. 5,963 ft.
Abernathy & Brown's No. 2 Houston, Sec. 24-6-13w	S.D. 1,115 ft.

COAL COUNTY

Dodd & Burton's No. 1 Grigsby, NW SE NE Sec. 35-1-8	S.D. 1,100 ft.
Funk & Russell's No. 1 Miller, SE NE Sec. 10-2-8	S.D. 2,750 ft.

COMANCHE COUNTY

G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w	S.D. 1,450 ft.

CREEK COUNTY

Sinclair Prairie Oil Co.'s No. 1 Tibe, SW SE NW Sec. 29-14-7	Drlg. 2,425 ft.
O. O. Owen's No. 1 fee, NW cor. Sec. 23-15-7	Drlg. 3,375 ft.

CUSTER COUNTY

Miley Pet. Co.'s No. 1 Caldwell, NE Sec. 12-14-14w	Location.

ELLIS COUNTY

Algers Pet. Co.'s No. 1 Roper, C SE NW Sec. 21-20-24w	S.D. 50 ft.

GRADY COUNTY

English Drlg. Co.'s No. 1 Heenan-Coe, NE SE NE Sec. 32-3-7w	S.O. 3,255-87 ft; S.D. 3,504 ft

GARFIELD COUNTY

Continental Oil Co.'s No. 1 Thompson, NW SW SW Sec. 7-24-4w	Drlg. 2,650 ft.
E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w	S.D. 5,850 ft.

GREER COUNTY

French's No. 1 Murphy, SW NW Sec. 33-7-21w	S.D. 1,645 ft.

HASKELL COUNTY

Ault et al's No. 1 Hall, NW SW SW Sec. 14-9-19	S.D. 2,000 ft.
Ault et al's No. 1 Hall, SE NW Sec. 25-9-9	S.D. 200 ft.

HUGHES COUNTY

Redwine et al's No. 1 Ellis, C NW NW Sec. 9-5-11	Rig.

KAY COUNTY

Blauner et al's No. 1 Maple, NE NW SE Sec. 20-27-4	Rig.
Lewis et al's No. 1 Harris, SE NW Sec. 14-25-1	Location.
Mummert Drlg. Co. et al's No. 1 Cormick, C NW SE Sec. 9-27-3	S.D. 3,693 ft.

KIOWA COUNTY

Emenhiser et al's No. 1 Pace, SW cor. Sec. 3-4-17w	Location.
McWhirter et al's No. 1 Vanderneck, NE NW Sec. 3-7-19w (O.W.D.D.)	Fishing 2,002 ft.
McWhirter Bros.' No. 1 Kline, SE NW Sec. 5-6-16w	S.D. 830 ft.
Christian's No. 1 Jones, NE SE Sec. 3-7-18w	Drlg. 1,640 ft.

NOBLE COUNTY

Sinclair Prairie's No. 1 Jerome, SW cor. Sec. 15-26-3w	Drlg. 2,000 ft.
Stanolind O. & G. Co. et al's No. 1 Kalb, C NE NW, Sec. 33-20-2w	T.D. 5,118 ft; flowed 650 bbls.; shot with 10 qts.; to run tubing and comp.; avg. 325 bbls.
Rollins et al's No. 1 Frank, SE SW Sec. 6-20-2w	Rig.

(Continued on Next Page)

1,458-64 feet and was landing casing to make a production test.

In the Hanbury Pool, in eastern Comanche County, Clyde Becker and others' No. 1 Ritchie, SE cor. SW SW, Section 19-2-9w, was plugging back to shoot a sand at 1,940-2,143 feet.

H. W. Chamberlain's No. 1 Munson, SE cor. NE NW, Section 30-2-9w, was shut down at 1,400 feet.

Denver Producing & Refining Co.'s No. 1 Noe, NW cor. SW SW, Section 34-10-10w, Caddo County, was drilling at 5,910 feet.

In Hughes County

The West Holdenville area in Hughes County was given an additional outlet for its production March 3, when the Mid-Continent Petroleum Corp. advised the Corporation Commission that it wanted to increase its nominations from 1,500 bbls. daily to 2,500 bbls. daily, from the Booch sand production in the West Holdenville Pool. The request was granted and made retroactive to March 1, giving the pool an outlet for 5,000 bbls. daily. The West Holdenville Pool is located in Township 7-8.

New Pipe Line to Fish Pool

Construction work on a new pipe line to serve the Fish Pool in eastern Seminole County has been started by The Texas Company. The line will be of 4-inch pipe from the company's East Little River station in Section 5-7-7 to the Fish Pool, in Township 7-8. Capacity of the line is estimated at 1,500 bbls. daily without setting additional pumps. Connections will be made to The Texas Company and Empire Oil & Refining Co.'s properties in the Fish Pool.

Oklahoma's "Potential"

The State's potential for the month of March is rated at 5,253,205 bbls. daily, which is an increase of 47,696 bbls. over the month of February. The fields showing increases were East Earlsboro, in Pottawatomie County; Tatums Field, Carter County; West Holdenville, in Hughes County, and the Oklahoma City Field. The Class "A" wells outside of the Greater Seminole area and the West Konawa Field in Seminole County both show declines. The following is potentials by pools:

Pools—	Pot.	Market demand
Greater Seminole:		
Class "B":		
Allen	18,264	7,672
Asher-Wanette	7,988	3,212
Bowlegs	24,902	10,271
Carr City	20,297	8,314
Earlsboro (Proper)	23,796	10,311
Earlsboro, E. (Wilcox)	16,511)	6,990
Earlsboro (E. Ext.)	1,041)	
Earlsboro (South)	4,850	1,725
Earlsboro Townsite	2,297	968
Konawa	7,960	3,045
Little River	39,120	15,820
Little River, East	2,954	1,312
Maud	2,132	841
Mission	14,131	6,005
Sasakwa	2,432	1,366
Searight	5,666	2,757
Seminole	23,289	9,769
East Seminole	2,111	879
Seminole, West	21,871	9,249
St. Louis	38,767	16,836
Total	280,379	
Class "C":		
Fish	34,778	2,500
Holdenville	21,309	4,000
West Konawa	2,660	800
Wewoka Townsite	3,528	2,000
Total	62,275	
E. Earlsboro (Calvin sand)	9,927	475
Total Greater Seminole	352,581	
Chandler	5,601	3,000
Orlando	900	500
West Perry	2,425	800
Tatums	59,469	3,500
Wildcats	15,196	1,600
Class "A" (outside Seminole)	32,101)	
Strippers (outside Seminole)	160,999)	172,550
Oklahoma City	4,623,933	152,814
Total State	5,253,205	461,881

The wildcat wells included in the list are the 12 wells in the State Line Pool, in Creek and Lincoln Counties; the 2 wells in Township 6-5, Pontotoc County; the 3 wells in the Wentz Pool, in Noble County, and the 4 wells in the Marshall Pool, in Logan County, producing from the School Land sand.

Carter County

Lundy and others' No. 1 Majors, NE cor. SE SE Section 25-1s-3w, an old well drilling deeper, is drilling at 2,592 feet. Samedan Oil Co.'s No. 1 Hopson, SE cor. NE Section 25-1s-3w, made 750 bbls. in 11 hours.

Creek County

Sherry and Murta's No. 3 Cruel, CSL SW NE Section 36-17-11, is a machine. Doke and Hughes' No. 1 Martin, SE cor. NE NE SW Section 1-19-9, was abandoned at 2,881 feet. Bailey's No. 1 Smith, NE cor. SW SE Section 18-19-9, made 30 bbls. from 2,252-73 feet. J. E. Abbott and others' No. 1 Unknown, NW cor. SE SW Section 26-19-9, was abandoned at 2,864 feet. C. G. Tibbens' No. 1 Wilson, SW cor. NE Section 18-14-9, made 2 bbls. from 1,255-58 feet.

Hughes County

Pringle and Marshall's No. 1 Narcomie, NE cor. NW SW SW Section 10-7-8, made 384 bbls. from 2,919-32 feet. Wofford Drilling Co.'s No. 2 Scott, NW cor. SE SW SW Section 10-7-8, made 180 bbls. from 2,897-2,926 feet.

Jefferson County

Fralyn Oil Co.'s No. 6 Seay, NW cor. NE SW SE Section 3-7-5w, is a location. Same company's No. 4 Seay, NE cor. SW SE Section 3-7-5w, made 75 bbls. from 1,232-40 feet.

Muskogee County

J. L. Selby's No. 11 Conners, CEL NW NW Section 6-14-15, is a machine. Same operator's No. 1 Conner (twin), CWL NE NW Section 6-14-15, made 20 bbls. from 599-630 feet. A. Z. Oil Co.'s No. 1 Howard, CEL NW NW Section 29-15-16, made 4 bbls. from 1,215-26 feet. Mack Drilling Co.'s No. 2 Richards, CEL NE SW Section 34-16-15, made 1,000,000 feet of gas from 1,105-15 feet.

Okmulgee County

Kennedy and others' No. 1 Walker, NW cor. SE Section 10-13-11, was abandoned at 3,200 feet. McEvoy and others' No. 1 Squire, SE cor. SW Section 6-16-13, made 6,000,000 feet of gas at 2,196-2,200 feet.

Okfuskee County

J. L. Selby's No. 1 Roberts, SE cor. SW Section 4-12-11, was drilling at 300 feet. Olean Petroleum Co.'s No. 1 Fish, NE cor. NW Section 36-10-11, an old well drilling deeper, total depth 3,146 feet. Same company's No. 1 Lucenda, SE cor. SW Section 25-10-11, made 60 bbls. from 3,187-90 feet. Eagle Picher's No. 2 Burgess, SE cor. NE SW Section 26-12-12, made 70 bbls. from 2,185-95 feet.

Osage County

Ohio Osage and others' No. 1, NE cor. NW Section 34-21-9, is a location. Kasishke, Inc.'s No. 1, SE cor. SW Section 13-24-7, an old well drilling deeper, total depth 2,555 feet. Fields and Potts' No. 4, NE cor. SE NE SE Section 12-21-11, made 20 bbls. from 1,802-28 feet.

Payne County

Kemp and Nunnelee's No. 1 Crane, SW cor. SE SW Section 10-17-6, is a rig.

Pawnee County

Schell and Seals' No. 1 Rea, SE cor. NE Section 18-20-9, is a rig. List and others' No. 1 Drew, SE cor. NE NE Section 18-21-8, is a rig. J. Sample's No. 1 Rea, NW cor. NE Section 18-20-9, made 7 bbls. from 1,255-73 feet.

Pontotoc County

Delaney and others' No. 1 Hardin, NE cor. SW Section 30-7-2, made 30,000,000 feet of gas from 1,170-81 feet.

Pottawatomie County

Sayre and McCrabb's No. 1 Smith, NE cor. SW Section 2-7-4, is a location. Seminole Supply Co.'s No. 1 Hawkins, SE cor. SW NW Section 10-7-4, made 30 bbls. from 3,715-3,992 feet.

Seminole County

United Oil Co.'s No. 1 Wood, SE cor. SW NW Section 29-6-6, is a rig Felmlee and others' No. 1 Bowlegs, SE cor. NE SW Section 1-7-7, is a rig. Gypsy Oil Co.'s No. 1 Willie, SW cor. NW NE Section 24-7-6, made 18 bbls. from 4,175-4,223 feet. Same company's No. 1 Beard, SW cor. NE Section 21-8-8, was abandoned at 4,336 feet. Droppleman's No. 1 Campbell, SE cor. SW NE Section 17-9-7, made 60 bbls. from 3,415-37 feet.

Stephens County

J. B. Willie's No. 1 Sears, SE cor. NE Section 20-2-8w, is a location. McLaughlin's No. 1 Gann, C NE SE NW Section 31-2-4w, was abandoned at 1,505 feet. Dun Marr Oil Co.'s No. 2 Dunbar, SW cor. NE NE Section 11-2s-8w, was abandoned at 2,251 feet.

Tulsa County

Lambert and others' No. 1 Adams, NE cor. Section 15-19-14, was abandoned at 1,860 feet. W. D. Dickinson's No. 2 McIntosh, CNL SE SW Section 17-19-14, made 30 bbls. from 1,300-30 feet.

Wagoner County

Dillard's No. 1 Jackson, CNL NW NE Section 22-18-15, is a rig. J. E. Martin's No. 2 Drew, CEL SW NE Section 26-18-15, is a rig. Dunbar and others' No. 1 Grayson, NE cor. NW NE SW Section 22-18-15, was drilling at 1,000 feet.

Wildcat Operations in Oklahoma

(Continued from Preceding Page)

OKLAHOMA COUNTY

Citizens Oil Co.'s No. 1 Sage Barber, NE cor. Sec. 21-11-3w ..... S.D. 1,200 ft.

PAWNEE COUNTY

G. N. Mainess and Westfield Drlg. Co.'s No. 1 Schildberg, NW SW NW Sec. 27-22-6 ..... S.D. 1,100 ft.
Deep Rock's No. 1 Crow, NE SE Sec. 26-22-6 ..... S.D. 3,082 ft.
Rookstool's No. 1 Wylie, NW NE SW Sec. 6-20-5 ..... S.D. 1,950 ft.

PAYNE COUNTY

Kemp & Nunnelee's No. 1 Crane, SW SE SW Sec. 10-17-6 Rig.

PITTSBURG COUNTY

Moffett & Hall's No. 1 Jones, NW cor. Sec. 14-8-14 ..... S.D. 1,675 ft.

PONTOTOC COUNTY

Hughes et al's No. 1 Norris, CNL NE SE Sec. 28-4-7 ..... Drlg. 350 ft.
H. L. Warrick's No. 1 fee, SE SW Sec. 29-2-7 ..... Location.
Gilbert's No. 1 Starritt, NW SE Sec. 28-4-6 ..... Rig.
Choctaw O. & G. Co.'s No. 1 Thompson, SW NE SW Sec. 1-1-7 ..... Machine.
Blackwell Oil & Gas Co.'s No. 1 Abbott, NW SW NE Sec. 14-4-6 ..... Sand 1,542-90 ft.; T.D. 1,710 ft.; to P.B.
Williams' No. 1 Krath, NE SE Sec. 33-3-4 ..... S.D. 1,565 ft.
Edna Marie's No. 1 McWhirt, NE SE Sec. 11-2-6 ..... S.D. 515 ft.

POTTAWATOMIE COUNTY

Payne Drlg. Co.'s No. 1 Lovelace, NW SW NW Sec. 27-6-4 Rig.

ROGER MILLS COUNTY

Ute Oil Co.'s No. 1 Williams, C SW Sec. 23-12-24w ..... S.D. 5,150 ft.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w ..... S.D. 3,420 ft.

SEMINOLE COUNTY

English et al's No. 1 Harjo, NE SW Sec. 3-8-8 ..... Fishing 676 ft.
Carter Oil Co.'s No. 1 Keokuk, C N half NW NE Sec. 2-10-6 ..... R.U.S.T. 4,090 ft.
Donnelly et al's No. 1 Shepard, SE NE Sec. 4-8-8 ..... Sand 1,395-1,405 ft.; water; fishing 1,640 ft.

WASHITA COUNTY

Miley Pet. Co.'s No. 1 Montgomery, SW NW SE NW Sec. 23-9-17w ..... S.D. 1,475 ft.
Miley Pet. Co.'s No. 1 Wolfe, NE SW Sec. 23-9-17w ..... Rig.
Cooper & Terhune's No. 1 Blocker, NW cor. Sec. 29-8-19w ..... Show oil 2,459-67 ft., S.D. 2,767 ft.
Burns & Prince's No. 1 Deck, SW cor. Sec. 21-8-18 ..... S.D. 2,160 ft.

Southern Oklahoma

ATOKA COUNTY

L. E. Stewart et al's No. 1 Stewart, SE SE Sec. 2-4s-10 ..... S.D. 1,300 ft.
Brookshire's No. 1 R. W. Rowland, NW NE SE Sec. 18-3s-10 ..... S.D. 3,425 ft.

CARTER COUNTY

E. M. Boring's No. 1 Morgan, C NE NW SW Sec. 4-1s-3w ..... Drlg. 1,250 ft.

JEFFERSON COUNTY

Abbott et al's No. 1 Simmons, NW cor. Sec. 13-6s-6 ..... Machine.
Bridwell Oil Co.'s No. 2 Front, NW cor. Sec. 3-7s-6w ..... Rig.
J. D. Wakefield et al's No. 1 Kelly, NW SE Sec. 1-5s-8w ..... Drlg. 275 ft.

MARSHALL COUNTY

Lee Cross' No. 1 Hamlin, SE SW SW Sec. 26-6S-5 ..... S.D. 900 ft.
Thomas' No. 1 Setliff, SW SE SE SW Sec. 36-5s-6 ..... S.D. 901 ft.

McCURTAIN COUNTY

Stampfs' No. 1 Robert Harris, SW NW SW Sec. 14-9s-25 ..... S.D. 2,778 ft.

PUSHMATAHA COUNTY

Whitehead et al's No. 1 Messer, SE SW SW Sec. 35-3s-18 ..... S.D. 2,096 ft.

STEPHENS COUNTY

Bridwell Oil Co. et al's No. 1 Weldon, NE SW SW NE Sec. 12-3s-8w ..... S.D. 2,300 ft.
Calif. Prod. & Oper. Co.'s No. 1 Suton, NE SE SW Sec. 12-3s-6w ..... Sand 646-48 ft.; S.D.
Gillette Bros.' No. 1 Cooley, NW SE NW Sec. 17-2s-8w ..... S.D. 2,560 ft.
George's No. 1 Ryan, NW SW NE Sec. 31-2s-15 ..... S.D. 510 ft.

TILLMAN COUNTY

Emenheser et al's No. 1 Pace, C SW Sec. 3-4S-17w ..... Drlg. 1,550 ft.
Gypsy Oil Co.'s No. 1 Pitcher, NW Sec. 26-4s-15w ..... Drlg. 1,675 ft.

West Texas Fields

(Continued from Page 36)

652-79 feet, initial production 20 bbls., total depth 679 feet. White & Duncan's No. 2-B S. Webb, oil sand 684-98 feet, initial production 30 bbls., total depth 698 feet. Wichita Production Co.'s No. 1 Abercrombie, sand showing oil and water 1,178-86 feet, initial production 6 bbls. oil and 3 bbls. water daily, total depth 1,187 feet.

Cooke County

L. L. Henderson's No. 1 A. McEwin, dry and abandoned, total depth 1,862 feet. Jacobs and others' No. 1 Jacobs, dry and abandoned, total depth 1,652 feet. W. F. Russell's No. 1 Dills, slight showing oil 1,762-74 feet, 1,774-82 feet and 1,797-1,810 feet, showed some oil and 1,600 feet of salt water in 12 hours, dry and abandoned, total depth 1,810 feet. Monroe and others' No. 1 Milburn, slight show oil 1,223-26 fect, swabbed show oil and salt water, dry and abandoned, total depth 1,226 feet.

Clay County

Alexander & Wallace's No. 1-A Mrs. D. M. Snedeker, no shows, dry and abandoned, total depth 902 feet.

Wichita County

J. L. Swanner's No. 8 Mrs. B. Parker, slight show oil 1,680-86 feet, water sand 1,700-10 feet, dry and abandoned, total depth 1,982 feet. R. R. Clark's No. 28 Bickley, oil sand 858-69 feet, initial production 35 bbls. daily, total depth 1,982 feet. D. M. Ross' No. 1 Waggoner Brothers, tight oil sand 1,418-21 feet, oil sand 1,414-18 feet, initial production 15 bbls. daily, total depth 1,421 feet.

Young County

W. F. Dolgner and others' No. 1 Alexander, dry and abandoned, total depth 590 feet. F. H. E. Oil Co.'s No. 2 E. C. Keith, dry and abandoned, total depth 760 feet. Gilmore & Deninger's No. 1 Stewart, water sand 577-86 feet, slight show oil 476-77 feet, dry and abandoned.

total depth 605 feet. N. C. Goldsmith's No. 1 Vernon, gas sand 894-902 feet, water sand 1,081-98 feet, gas sand 1,235-40 feet, water sand 1,240-50 feet, dry and abandoned, total depth 1,250 feet. Helena Oil & Gas Co.'s No. 2 A. M. Graham, dry and abandoned, total depth 708 feet. Hinson Tidwell & Lindsey's No. 1 G. M. James, shot 70 quarts from 3,871-3,913 feet and shot 30 quarts from 3,942-54 feet, initial production 285 bbls. daily, flowing, total depth 3,990 feet. Iron Mountain Oil Co.'s No. 3-A Hinson, oil sand 855-58 feet, water sand 858-59 feet, dry and abandoned, total depth 859 feet; No. 18 Tatum, oil sand 652-56 feet, initial production 5 bbls. oil with little water, total depth 656 feet.

Perkins & Cullum's No. 9 Lemmond, oil sand 734-40 feet, initial production 10 bbls. oil daily, total depth 740 feet; No. 10 Lemmond, oil sand 725-30 feet, oil sand 732-37 feet, initial production 15 bbls. oil daily, total depth 737 feet. M. E. Peters' No. 1 Carpenter, oil sand 888-90 feet, initial production 10 bbls. oil daily, total depth 890 feet. W. M. Ramsier and others' No. 1 Routon, oil sand 726-30 feet, water sand 730-50 feet, dry and abandoned, total depth 750 feet. T. G. Shaw and others' No. 2 J. Marshall, oil sand 880½-81½ feet, initial production 40 bbls. oil in 18 hours, total depth 881½ feet. S. H. Simmons' No. 1 W. A. Couch, dry and abandoned, total depth 600 feet. F. E. Webb's No. 1 Oatman, dry and abandoned, total depth 685 feet. J. N. Wilson's No. 1 Senkel, dry and abandoned, total depth 550 feet. Worth Oil Co.'s No. 4-C George Garrett, oil sand 506-25 feet, initial production 5 bbls. oil daily, total depth 525 feet.

COMPLETIONS IN RANGER DISTRICT

Brown County

H. A. Brown's (Warren) No. 3 J. W. Newton, show oil 1,238-49 feet, dry and abandoned, total depth 1,270 feet. Cranfill & Reynolds' No. 1-A-20 Childress, top Ellenberger 2,005 feet, show oil 1,670 feet, dry and abandoned, total depth 2,055 feet. H. Winters and others' No. 2 Fred Turner, slight show oil and water 1,481-95 feet, dry and abandoned, total depth 1,504 feet.

Callahan County

Broderick & Calvert's No. 1 Walker-Caldwell, salt water 798-810 feet, dry and abandoned, total depth 978 feet. R. C. McCarter's No. 1 T. P. Long, slight show oil and water 358-71 feet, dry and abandoned, total depth 371 feet.

Coleman County

Engle & Coulson's No. 1 W. J. Coulson, dry and abandoned, total depth 1,405 feet.

Grayson County

John Marshall's No. 1 Caddell, dry and abandoned, total depth 250 feet; No. 1 B. F. Mauk, dry and abandoned, total depth 500 feet.

Parker County

J. Clark's No. 1 fee, slight show gas 675-705 feet, dry and abandoned, total depth 720 feet.

Palo Pinto County

Brazos River Oil & Gas Co.'s No. 5 Bridges, dry sand 1,348-49 feet, dry and abandoned, total depth 1,600 feet. Christie Brothers' No. 2 Allen Ritchie, hole full water 2,390-95 feet, dry and abandoned, total depth 2,425 feet.

Shackelford County

C. C. Carroll and others' No. 2 Clausell, water sand 670-85 feet, 500,000 feet gas 542-50 feet, dry and abandoned, total depth 868 feet. Loggie and others' No. 1 Hask, water sand 743-45 feet, dry and abandoned, total depth 745 feet. Union & Walker's No. 1 King, gas sand 480-84 feet, initial production 1,000,000 feet of gas, total depth 484 feet.

Stephens County

Donley & Chastin's No. 1 Hawkins, gas 2,035-42 feet, gas 2,065-76 feet, water 2,086-88 feet, initial production 5,000,000 feet of gas with 650 pounds rock pressure, total depth 2,088 feet, plugged back to 2,080 feet. Hanlon Gasoline Co.'s No. 1 C. C. Vick, dry and abandoned, total depth 2,260 feet.

COMPLETIONS IN PANHANDLE

Carson County

Gulf Production Co.'s No. 6 Cooper, top pay 3,035 feet, shot 110 quarts from 3,030-75 feet, initial production 505 bbls. daily, pumping, total depth 3,075 feet.

Gray County

Tripplehorn's No. 1 Lovett, top pay 3,142 feet, initial production 74 bbls. on a five-day pumping proration test, total depth 3,142 feet.

COMPLETIONS IN WEST TEXAS

Ward County

Atlantic Oil Producing Co.'s No. 2 Jones, show oil 2,050 feet, show oil 2,-175 feet, show oil and gas 2,507 feet and 2,537-42 feet, increase oil 2,590 feet, initial production 160 bbls. daily, flowing, total depth 2,593 feet. Eastland Oil Co.'s No. 1 Grimes, show oil and gas 2,370 feet and 2,410-25, 2,452-68 feet, top pay 2,370 feet, shot 200 quarts from 2,380-2,470 feet, initial production 30 bbls. daily, flowing, total depth 2,480 feet. George McCamey's No. 1 Carey, 2 bailers salt water per hour from 2,515-30 feet, increase water 2,535-40 feet, hole filled 200 feet with water in two hours, dry and abandoned, no shows, total depth 2,-532 feet.

SELECT ADDITIONAL DIRECTORS

Carrying out a previously expressed desire to make the Oklahoma Natural Gas Corporation strictly an Oklahoma institution operated by Oklahoma for the benefit of the citizenship of Oklahoma, Frank E. Kistler, chairman of the board, has announced the election of five prominent men of the state to the board of directors. The new members are A. L. Farmer, Walter Ferguson, Wilbur T. Funk and Dudley D. Moran, all of Tulsa, and Charles W. Gunter of Oklahoma City. Other board members are Mr. Kistler, Robert W. Hendee, president; W. K. Cottrell, secretary-treasurer, and R. C. Allen, general counsel.

Dangerous Precedent Is Being Presented in Proposed Anti-Truck Legislation

WASHINGTON, D. C., Mar. 6.—Organized groups of highway users in 26 states were warned today by Roy F. Britton, director of the National Highway Users Conference, that a dangerous precedent is provided in pending anti-highway legislation in many states, approved by the Association of Railway and Utility Commissioners, for imposing in a regulatory act an operations tax, which may logically be applied to telegraph, telephone, railroad and other public utilities.

The announced purpose of the bills, which have been introduced in many legislatures, is to provide for the regulation of the operation of motor vehicles. In many states these bills are almost identical and in others they are so similar as to indicate clearly a common authorship. Examples of this proposed legislation are the bills introduced in the state legislatures of Wisconsin and Iowa. These and other bills which have been introduced are in the main copied after the "model" motor regulatory bill which was approved by the Association of Railroad and Utilities Commissioners at Hot Springs, Ark., November 15, 1932.

The bills vary only in detail. They follow the general lines of the "model" bill although that was amended by the legislative committee of the association so that it would control contract carriers along the lines suggested by the U. S. Supreme Court in its decision on the Texas regulatory act.

They provide for the regulation by a state commission, usually the railroad commission, of the common and contract carrier by truck and bus and also of the private carriers by trucks.

They go even farther and propose the imposition of mileage taxes upon all three classes of motor transportation.

In the "model" bill, which has been so widely circulated, the amount of the tax per mile is left blank for a rate to be inserted by the prospective commission. In the bill introduced in the Wisconsin legislature provision is made for a mileage tax, starting with one-half a cent per mile for vehicles weighing less than 6,000 pounds and running up to over 4 cents a mile for vehicles weighing 40,000 pounds, intermediate graduation being at the rate of one-fourth of a cent for every 2,000 pounds of gross weight. In that sent to the senate in Iowa the tax proposed is one-sixteenth of a cent per vehicle mile for every 500 pounds of gross weight. This on a vehicle weighing 26,000 pounds would amount to 4¼ cents per mile.

"Radical proposals have been made to the legislatures before," said Mr. Britton in a statement on the situation, "but these are the first in which legislators have placed themselves in the position of seeking regulation on one hand and, on the other, the placing of prohibitive taxes on operation.

"In no other act for the regulation of any other of our utilities, telephones, telegraphs, or railroads is there a provision levying a tax on operation. If this proposal is accepted by any legislature it will be a bad precedent and the members of the association are laying themselves open to considerable criticism by recommending as the agency which will exercise regulatory control, an act which has as one of its main features a heavy operating tax. Incorporated as this tax proposal is in an act primarily designed to regulate in the interest of the public the business of transporting persons and goods on the highways, it leaves the category of regulation and takes on the character of revenue legislation. It has been amply proven by judicial action that any procedure involving regulation by taxation is economically unsound and likely to lead to the ruin of the industry so regulated.

"The recommendations in the 'model' bill, drafted in conformity with this provision, become a warning to other utilities, such as telegraph, telephone, electric light and power companies. If the regulatory commissions are successful in their attempt to tax the motor carriers the next logical step will be the imposition by them of a specific tax upon these other utilities. The highway users object to being singled out as the one group serving the public upon which the regulatory authorities are permitted to place a special tax."

The so-called "model" bill proposes to regulate all privately operated property carrying vehicles and would require them to obtain permits from the regulatory authorities. The regulatory commission would be given blanket authority to regulate the business of these private operators, who carry only their own products in their own vehicles. The commission would be given authority to suspend or revoke these permits to these purely private operators, for a noncompliance with the provisions of the law or the rules and regulations of the commission. "The next step in granting such authority to a regulatory commission," said Mr. Britton, "will be the forcing of the private operator to forego the operating of his own vehicles and ship his products by common and contract carriers, thereby, in turn, increasing transportation costs and again adding to the commodity price of the products to be transported.

East Texas Fields

(Continued from Page 38)

feet, initial production 110 bbls. per hour through open tubing, total depth 3,659 feet. Sun Oil Co.'s No. 13 Hargrave, top sand 3,723 feet, initial production 32 bbls. per hour through tapered tubing, total depth 3,728 feet.

WILDCAT COMPLETIONS

Leon County

Shell-Penn Black and others' No. 1 W. M. Phillips, top Pecan Gap 4,135 feet, base 4,181 feet, top Austin chalk 3,841 feet, base 5,035 feet, top first sand 6,-054 feet, base 6,068 feet, top second sand 6,147 feet, base 6,158 feet, dry and abandoned, total depth 6,300 feet, elevation 423 feet, E. A. Swayze Survey.

Wood County

De Genther's No. 1 N. L. McLain, drill stem test 1,930-45 feet showed one fourble salt water in eight minutes, drill stem test from 1,882-1,904 feet showed five fourbles mud in 15 minutes, dry and abandoned, total depth 3,928 feet, elevation 455 feet, Sam Brooks Survey.

Van Field—Van Zandt County

Pure Oil Co.'s No. 6 I. D. Miller, initial production 202 bbls. first 24 hours after choked, total depth 2,954 feet. The Texas Company's No. 4 J. A. Bracken, initial production 165 bbls. during first 24 hours after choked, total depth 2,933 feet.

DIESEL PUMPS FOR IRAQ

It was announced in London that the Iraq Petroleum Co., Ltd., has placed with Harland & Wolff, Ltd., a contract for 15 Diesel engines of 500 horsepower each, of the four-stroke, single acting airless injection type, for five of the pumping stations on the Iraq Pipe Line. The building of the engines is being carried out at the company's Diesel Engine Works, Glasgow.

ROCKY MOUNTAIN RUNS

Average daily pipe line runs from fields in the Rocky Mountain territory for the week ending March 4 follow:

	Bbls.
WYOMING	
Salt Creek	20,420
Big Muddy	1,920
Badger Basin	50
Byron Garland	130
Dallas-Derby	550
Dutton Creek	80
Elk Basin	660
Ferris	20
Frannie	320
Grass Creek	1,680
Hamilton Dome	590
Hudson	340
LaBarge	1,150
Lance Creek	0
Lost Soldier	1,670
Midway	100
Oregon Basin	290
Osage	730
Pilot Butte	30
Rock River	1,470
Poison Spider	60
Teapot	0
Total Wyoming	32,130
MONTANA	
Buckley-Border	350
Cat Creek	750
Cut Bank	300
Dry Creek	30
Kevin-Sunburst	3,100
Lake Basin	50
Pondera	1,240
Total Montana	5,820
COLORADO	
Florence	290
Fort Collins and Wellington	630
Iles Dome	500
Moffat	700
Orchard	170
Rangely	40
Tow Creek	250
Total Colorado	2,580
NEW MEXICO	
Artesia	421
Caprock	943
Hogback	240
Jal	1,161
Table Mesa	50
Eunice	505
Hobbs	30,302
Lea	2,229
Texas-Pacific	95
Rattlesnake	720
Total New Mexico	36,666
Total Rocky Mountain area	77,196
Total previous week	76,444
Difference	752

Kansas Produces 112,250 Bbls. Daily as Demand for Oil From That State Keeps Increasing

By W. A. SPINNEY
Staff Correspondent, Kansas Fields

Oil production from Kansas fields continues to show an increase. For the week ending March 4 production is estimated at 112,250 bbls. daily, which was an increase of approximately 4,000 bbls. daily over the previous week. McPherson County areas were mainly responsible with Ritz-Canton-Decker showing 3,000-bbls. and the Mabee Pool 1,000-bbl. increases.

Exploration of McPherson County for the purpose of finding new oil-producing areas continues. Sever and Hessman's No. 1 Schrag, SW cor. SE Section 22-19-4w, is a new wildcat location. It will be drilled in territory where there has been no drilling with the exception of a dry hole that was drilled about a mile north of Conway. The new location is about 2½ miles east of Conway.

Investers Mineral Development Co.'s No. 1 Kaufman, SE cor. Section 35-21-3w, is also a wildcat location, about 2 miles east of the Mabee Pool. A slush pond and cellar are being dug. If it makes a commercial well it will force three offsets, two of which will be in Harvey County.

New Work in Harvey County

The development in the northwestern part of Harvey County continues at a steady rate. New operations starting during the week include Shell Petroleum Corp. and Olson Oil Co.'s No. 1 Voth, SW cor NW Section 4-22-3w, which will be drilled with rotary tools, and Sinclair Prairie Oil Co. and Olson Oil Co.'s No. 1 Schroeder, NE cor. SE Section 5-22-3w. Both of these tests are in the south extension area of the Mabee Pool. These wells are both offsets of Orville Lee Drilling Co. and others' No. 1 Wall, NW cor. SW Section 4-22-3w, a recently completed Hunton lime well which has an estimated potential of 1,500 bbls. daily.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. drilled a dry hole a quarter of a mile south of the Sinclair Prairie Oil Co.'s well about two years ago which had a showing of oil. About 2 miles to the southwest of these new wells, Carter Oil Co. and others' No. 1 Schmidt, Section 17-22-3w, was drilling to the Hunton lime after finding around 25,000,000 feet of gas in the chat, which has been bradenheaded.

Other wells in the Hollow Pool, near the pay horizon, are the W. C. McBride, Inc.'s No. 1 Schmidt, NE cor. Section 30-22-3w, which is underreaming at a total depth of 3,175 feet, and Mid-Kansas Oil & Gas Co.'s No. 1 Dierkson, SW cor. SE Section 19-22-3w, which is underreaming the 12-inch casing at 1,820 feet.

In McPherson County

On the east edge of the Ritz-Canton-Decker Pool, in McPherson County, Spitz and others' No. 1 Blair, NW cor. SW SE Section 29-19-1w, is a location. It is on acreage formerly held by the Mid-Kansas Oil & Gas Co., which was surrendered to the landowner at the expiration of the lease.

The wildcat test of Lario Oil & Gas Co., No. 1 Wilke, C SE NE Section 34-20-3w, was drilling at 2,980 feet expecting the chat shortly. The test is located in territory that is all leased and if it makes a commercial well will result in considerable new activity.

Skelly Oil Co.'s No. 1 Cole, SE NW Section 4-26-8w, a wildcat test in Reno County, north of the Kingman County lime, was drilling in the Kinderhook shale at 4,050 feet. This formation lies above the Viola lime, which is expected in a short time.

Postpone Potentials

The taking of new potentials in the prorated areas in the State has been postponed indefinitely, it was announced during the week by the Kansas Public Service Commission through State Umpire L. R. Pickrell.

No general order had been made for the taking of new potentials and it is believed it is now the intention to withhold further action in regard to the potentials until after a hearing of the commission at which time the question of potentials will be the principal subject. Because of the congested docket of the Public Service Commission it will be impossible to have a hearing earlier in the month.

Decision to postpone the taking of new potentials, which was for tax purposes, followed the complaints of several oil producers. Some objected to the fact that they would be forced to sell an excessive amount of oil at the present low market price, but if the taking of potentials is postponed they may receive a higher price at a later time.

Olson Oil Co. and others' No. 1 Atkins, C SE SW, Section 35-23-4w, Reno County, has started spudding. It is located in the southern part of the Blake Pool and is the north offset to the Skelly Oil Co.'s No. 1 Frantz.

Slick, Pryor & Lockhart's No. 1 Breford, NE cor. SE, Section 12-17-11w, Barton County, was pumping around 10 bbls. of oil an hour from 3,121-3,225 feet.

In the Breford area the Magnolia Petroleum Co.'s No. 1 Andres, in Section 7-17-10w, Ellsworth County, found the top of the Lansing lime at 3,152 feet with a show of oil and after drilling to 3,214 feet it pumped 108 bbls. of oil in 24 hours.

Crude Oil Demand Increases

During the last week the crude oil demand in Kansas has been stronger and crude oil purchasers have increased their nominations until at this time almost all of the wells in the central western part of the State have pipe line connections. Some of the companies that have been seeking additional crude are the White Eagle Oil Corp., Skelly Oil Co., Phillips Petroleum Co., Derby Oil Co. and Stanolind Crude Oil Purchasing Co.

During the week the Skelly Oil Co. made connections to three additional wells in the Hollow Pool, in Harvey County, increasing its nominations to 350 bbls. per well per day. The Stanolind Crude Oil Purchasing Co. also increased its nominations to 350 bbls. per well in this area.

Due to increased nominations in the Ritz-Canton-Decker area in McPherson County, the allowable of the deep sand wells was increased from 30 to 40 per cent February 28, while there was no change made in the chat formation, some of which are believed to be producing 100 per cent of their production.

The White Eagle Oil Corp. and the Phillips Petroleum Co. are the largest purchasers of crude oil in the area. The following is the nominations by companies:

Company—	Nomination
White Eagle Oil Corp.	10,000
Phillips Pet. Co.	7,500
Shell Pet. Corp.	2,800
Globe Oil & Ref. Co.	2,600
Dickey Oil Co.	1,570
Stanolind C. O. P. Co.	1,470
Skelly Oil Co.	760
Total	26,700

Voshell Pool Increase

Another increase in nominations was made in the Voshell Pool, in McPherson County, February 28, where the deep sand production was increased from 10 per cent to 50 per cent of the potential. Some of the chat wells in the south end of the field are producing at full capacity.

The Kansas Public Service Co. announces that in the matter of the All States Petroleum Co.'s location within 50 feet of The Texas Company's property line in Section 21-21-3w, in the Voshell Pool, in McPherson County, that no permit will be issued for a well to be drilled on this location. They announced that a well drilled on the proposed location within 50 feet of the line would cause underground waste, and waste incident to the producing of petroleum and that the drilling causing the forcing of extra and closely spaced wells would cause unfair taking of oil from this area of the field, tending to reduce pressure and cause more rapid movement of water and damage of property rights and cause physical wastes of these and other landowners and producers of the field.

The Ninnescah Oil & Gas Co.'s No. 1 Hardesty, SW cor. SE SE Section 28-27-11w, Pratt County, a wildcat, found a showing of oil at 3,336-42 feet, and a showing of water at 3,644-47 feet and another showing of oil at 3,657-58 feet. Fluid rose in the hole 1,700 feet and the well was shut in according to the last reports.

Cowley County

Hunt and others' No. 1 Denton, NW cor. Section 10-31-8, is a location. McNabb and others' No. 1 Forsythe, SW cor. NE Section 11-32-4, is a rig. Roth & Farout's No. 1 Graham, SW cor. NW Section 14-32-4, was abandoned at 3,475 feet.

Chase County

Polhamus and Smith's No. 6 Leedy, NE cor. NW NW Section 36-22-9, made 100 bbls. from 2,465-2,500 feet.

Greenwood County

Empire Oil & Refining Co.'s No. 3 Derby, NE cor. NW SW Section 14-22-11, an old well drilling deeper, was rigging up, total depth 1,905 feet.

Harvey County

Shell Petroleum Corp.'s No. 1 Voth, SW cor. NW Section 4-22-3w, is a rig. Sinclair Prairie Oil Co.'s No. 1 Schroeder, NE cor. SE Section 5-22-3w, is a

(Continued on Page 55)

Wildcat Operations in Kansas

(Descriptions are East unless marked otherwise)

BARTON COUNTY

Company, farm and location— Remarks

Noble Drlg. Co.'s No. 1 Grant, SW SW Sec. 4-20-11w....Drlg. 1,000 ft.
Vickers Petroleum Co.'s No. 1 Kerr, NW SE Sec. 15-16-12w ....Drlg. 2,500 ft.
Rankin's No. 1 Booey, C SW NE Sec. 34-18-12w.....S.D. 2,100 ft.
Skelton Oil Co.'s No. 1 Ott, C SE SE Sec. 16-19-14w.....Set liner 3,530-46 ft.; show oil; S.D. 3,605 ft.

BUTLER COUNTY

Reeser's No. 1 Hull, NW SE Sec. 3-26-9.....Drlg. 1,000 ft.

ELLIS COUNTY

Phillips Pet. Co.'s No. 1 Unknown, C SW Sec. 33-11-17w..Location.

ELLSWORTH COUNTY

Rex Etnyre's No. 1 Arnsman, C SW SW Sec. 10-15-7w...Rig.
Buckford's No. 1 Burke, C NE SW Sec. 14-14-9w.. .....S.D. 50 ft.

GRAHAM COUNTY

Schleimeyer et al's No. 1 Smith, SE Sec. 24-8-25w U.R. 4,000 ft.

GREENWOOD COUNTY

Wright's No. 1 Madren, SW SE SW Sec. 29-22-12.....Machine.
Knight et al's No. 1 Moser, NE SW SW Sec. 33-22-12...Machine.

HARVEY COUNTY

Phillips Pet. Co.'s No. 1 Weeks, NE SE NE Sec. 30-23-3..Drlg. 3,090 ft.

MARION COUNTY

Farrell et al's No. 1 Williamson, C NW SE Sec. 21-19-4..S.D. 2,667 ft.

McPHERSON COUNTY

Lario O. & G. Co.'s No. 1 Wilke, C SE NE Sec. 34-20-4w. Drlg. 2,990 ft.
Whan et al's No. 1 Nelson, NW SE Section 18-19-2w.....Location
Snyder et al's No. 1 Carlson, SE cor Sec 4-19-3w..... S.D. 2,858 ft.
Shawver et al's No. 1 Nichols, NE NW NW Sec. 28-17-1w..Drlg. 1,225 ft.

MORTON COUNTY

Hydraulic Oil Co.'s No. 1 State Land, NW SE Sec. 22, 34-43w .....T.D. 3,640 ft.; temp. abd.

NESS COUNTY

Sinclair Prairie Oil & Gas Co.'s No. 1, C SW SW Sec. 16-19-21w .....Sil. 4,702-77 ft.; wtr.; abd.

NORTON COUNTY

Richards et al's No. 1 Colby, Sec. 17-4-21w.....Rig.

OSAGE COUNTY

Briggs & Smith's No. 1 Wood, SE NW Sec. 21-14-15.....S.O. 2,190-2,200 ft.; temp. abnd.

PRATT COUNTY

Ninnescah O. & G. Co.'s No. 1 Hardesty, SW SE SE Sec. 28-27-11w .....Drlg. 3,621-27 ft; S.O. 3,657-58 ft; 1,500 ft. oil in hole.

RENO COUNTY

Skelly Oil Co.'s No. 1 Cole, C SE NW Sec. 4-26-8w .....Chat 3,838-3,900 ft; wtr.; Viola 4,171 ft.
T. L. Johnson's No. 1 Crotts, NE NW NE Sec. 27-26-10w..S.D. 250 ft.

RICE COUNTY

Langston et al's No. 1 Wells, NE SE Sec. 4-20-9w.....Rig.
J. Liggett et al's No. 1 Thodel, C NW NW Sec. 11-21-7w..S.D. 50 ft.

ROOKS COUNTY

Kruger's No. 1 Rathburn, SE NW SW Sec. 14-9-16w....Rig.

SALINE COUNTY

Lario O. & G. Co.'s No. 1 Fulton, SW NW Sec. 14-16-2w.Spudding.

STEVENS COUNTY

Argus Prod.'s No. 2 Christopher, C NE Sec. 10-33-39w....S.D. 5,521 ft.

STAFFORD COUNTY

Atlantic Oil Prod. Co.'s No. 1 Gates, NW SE Sec. 27-21-13w .....Drlg. 495 ft.
Stringer et al's No. 1 Swindle, SW NE Sec. 2-26-11w.....Spudded; S.D.

SUMNER COUNTY

Deal Oil & Gas Co.'s No. 1 Thompkins, SW cor. Sec. 26-35-1 .....Machine.

WOODSON COUNTY

Spencer et al's No. 1 Weidel, NW cor. Sec. 5-24-15 .....T.D. 1,578 ft; P.B. to 1,558 ft.

Four Completions With Twelve New Locations in North Louisiana, Arkansas, Mississippi

By D. H. BANCROFT
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Mar. 6.—Testing of R. E. L. Silvey's Webster Parish wildcat, an oil show in Miller County, Arkansas, and a few new locations in Mississippi were the relieving features of an uneventful week in this territory. Silvey's No. 1 Drake, NE NW Section 14-19-10, swabbed dry with no show of oil at 2,835 feet, took another core to 2,840 feet of sandy green shale and tested salt water. From 2,816-24 feet it cored sand with a small gas show and from 2,824-29 feet sand claimed to have a little oil in it. He figured he was in the Woodbine but was in the Blossom instead and set casing without running a drill stem test of the formations and on identification of his cores there was little faith that he would make a well. This horizon is checking lower in this well than in Cotton Valley, 14 miles north, but neither this fact nor his dry test necessarily condemns the territory with respect to chances for production in the Woodbine. At any rate, his contract calls for a test of the upper Trinity horizons and the well will continue down to 4,000-4,500 feet.

There were only four completions, all dry, during the week, and 12 new locations. One of the completions was an abandoned location in Zwolle, W. C. Beene and others' No. 1 Cutrer, NW NW Section 12-7-11. J. H. Warlick's No. 1 Brown Lumber Co., NW NE Section 31-8-10, was dry and abandoned at 2,634 feet. Llano Co-operative Colony's No. 1 fee, NW NE Section 34-2n-9, Vernon Parish, was abandoned at 3,637 feet as a junked hole and location made for No. 2 fee in the SE cor. SE NE Section 6-1n-9. B. B. Jones' No. 1 Bank of Philadelphia, SE SE Section 35-3n-12, Jasper County, Mississippi, was abandoned at 5,120 feet in the Eutaw.

New Locations

New locations in North Louisiana territory were: C. O. Crockett's No. 1 C. E. Jenkins, SE SE Section 5-12-11, DeSoto Parish, and five in Zwolle proven area as follows: H. H. Alvord's No. 1 Sabine State Bank, NW SW Section 28-8-11; Graham Production Co.'s No. 1-B Lites, SE SW Section 28-8-11; Pugh-Hickman Drilling Co.'s No. 3 Blackman, NW NW Section 36-8-12; A. H. Tarver's No. 1 Barthold & Steinhorst, SW SW Section 25-8-12, and Byers and others' No. 1 Ervin & Bishop, SW NE Section 16-7-11, an old well abandoned by the same operators last December, which they will deepen from 1,500 feet. Lyons, Neely & Clark have derrick up for No. 1 Anderson Stovall, NW SE Section 2-22-9, Webster Parish, 4 miles southwest of the old Haynesville Field in Claiborne Parish. In Mississippi Eastman-Gardiner interests began drilling No. 1 E. B. Pickering, NE NW Section 19-8-15, Covington County, as the second of five tests, four 3,500 feet and one 7,500 feet they have contracted for, and the first of which was reported last week as temporarily abandoned.

Pelican Oil & Gasoline Co. has derrick up for No. 1 Luce Packing Co. in the SW Section 25-15-6, George County. J. A. Baker is rigging up on No. 3 Rankinside Development Co., NE NW Section 6-5-2e, Rankin County side of the Jackson gas field. Mississippi Oil & Gas Development Co. has begun drilling the second of five 4,000-foot tests it is to make on as many 25,000-acre blocks. No. 1 Dockery, SE SW Section 21-22-4, Sunflower County.

NORTH LOUISIANA

Magnolia Petroleum Co.'s No. 20 Doan Thigpen, SE SE Section 6-20-15, in the Oil City district of the old Caddo Field topped the chalk at 1,321 feet and bailed 19 bbls. of oil in 12 hours after acid treatment at 1,584 feet. United Gas Public Service Co. made another test on No. 1 Levee Board, Section 27-23-16, Rodessa deep gas district of Caddo, and got 10,000,000 feet from around 5,600 feet, about twice as much as it got on the first test at 5,585 feet with the testing tool open for 15 minutes. Its No. 1 Meadows, Section 13-21-5, Claiborne Parish, was dry on drill stem test in the base of the anhydrite at 4,037 feet, and is coring at 4,055 feet. DeSoto Brothers were coring fresh water sand at 517 feet on No. 1 Smith, Section 11-10-8, Natchitoches Parish.

In Sabine Parish R. T. Henderson's wildcat, No. 1 Sistrunk, SE NW Section 9-9-12, was arranging for a test at 2,079 feet after a previous test at 1,999 feet was dry. Scully and Beach are rigging up to deepen No. 3 Lafitte, Section 13-7-11, Zwolle, from 2,492 feet, deciding not to try to make a pumper of it at that depth where it had 150 feet of oil in the hole. H. H. Alvord's No. 1 Sabine State Bank, NW SW Section 28-8-11, referred to above, an old well arranging to set tubing after a test at 2,600 feet, developed only 40 bbls. an hour for a few hours and went dead. In the Converse area of Sabine, Lambert and others tested dry at 1,948 feet with a little show of gas on No. 1 Edwards, SW NW Section 29-9-13. Sandfield Oil & Gas Co.'s No. 1 Bowman-Hicks made drill stem test at 3,230-49 feet and got six joints of mud with a small show of gas at 3,250 feet.

ARKANSAS

McDonald & Carroll did not run drill stem test on No. 1 Adams, SE SW Section 2-19-26, Lafayette County, designed for a 4,000-foot test on a 6,000-acre block, but are arranging to set a string of 6-inch at around 3,367 feet.

Magnolia Petroleum Co.'s No. 1 Olivet, NW NE Section 4-16-26, Miller County, an offset to Baker & McMurray's producer on the same farm, is arranging for a drill stem test, total depth 2,925 feet. From 2,919-20 feet was shale then 2 feet of conglomerate, then 1½ feet of hard sand and from 2,923½ to 2,925 feet the core was saturated—all of which is a more detailed and accurate check on producing depth and formation than has been received here so far. Baker & McMurray's No. 1 Olivet is pumping 100 bbls. oil and between 400 and 500 bbls. salt water, but their No. 1 Beck, the first of the three producers that have made Miller County a hot spot, flowed for a while and went dead, has not yet been standardized. It is a north offset to the Olivet in Section 33-15-26. Jenkins Brothers' No. 1 Smith, SE SE Section 32-15-26, is still shut down at 3,450 feet in what is claimed to be a new sand. Duluth-Arkansas Oil Co.'s No. 1 Price, NW NE Section 18-16-25, about 4 miles southeast of production, cored sand and shale at 2,815 feet.

Many locations in Miller County were abandoned last week but at the same time there remains quite a bit of activity with a number of wells progressing from locations to derricks and from derricks to rigs, so that in the long run Miller County will be given its share of attention for some time to come.

MISSISSIPPI

Except for the new locations already reported, Mississippi was quiet. Stauffer & Kouri are arranging to set 6⅝-inch on top of green sand found at 3,026 feet on No. 1 Bond, SE NE Section 18-2n-14, Lamar County, total depth 3,030 feet, and in Monroe County P. J. McAlpine is arranging to set 6-inch at 2,709 feet for a test of No. 1 Rye, Section 22-15-17, one-half mile west of the discovery gas well that gave Mississippi developments the start that eventuated in the Jackson gas field and all the wildcat play that has been going on in the state for the past several years.

Daily Average Runs

Pipe line run figures for the week showed an immediate reaction to completion last week of Pugh-Hickman Drilling Co.'s big well in Zwolle, No. 2 Blackman, NW NW Section 36-8-12, which increased Louisiana runs 3,340 bbls. and the net for the territory as a whole 2,170 bbls., the difference being due to smaller runs from Arkansas pools. Last week Zwolle moved 2,585 bbls. This week the daily average was 11,445 bbls. The well was rated 2,000 bbls. on completion but actually is doing better than that, having run approximately 12,000 bbls. the first week after completion and around 2,700 bbls. daily since then. Total daily average runs from the territory were 63,115 bbls., of which 32,335 were from Louisiana and 30,780 bbls. from Arkansas. Runs from the several pools were:

NORTH LOUISIANA	Bbls.
Caddo light	5,160
Caddo heavy	1,795
Cotton Valley	625
DeSoto-Red River	1,750
Elm Grove	365
Haynesville	3,940
Holly	225
Homer	2,740
Pleasant Hill	300
Sarepta-Carterville	690
Urania	3,300
Zwolle	11,445
Total	32,335
Last week	28,995
Increase	3,340

ARKANSAS	
Champagnolle	1,445
El Dorado	2,690
Lisbon	405
Miller County	100
Nevada County	975
Smackover light	2,575
Smackover heavy	21,880
Stephens	140
Urbana	570
Total	30,780
Last week	31,950
Decrease	1,170
Both states	63,115
Last week	60,945
Increase	2,170

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

North Louisiana

Company, well, farm name, section and block—	Remarks:
AVOYELLES PARISH	
T. J. Woodley, tr.'s No. 1 Thompson & Kolts, 2,640 ft. E, 200 ft. S, NW cor. Sec. 11-3n-5e	Washing to bottom; T.D. 2,250 ft.
BEAUREGARD PARISH	
Beaver Pet. Co.'s (S. T. Ongett, tr.) No. 1 Long-Bell Lbr. Co., 155 ft. S, 725 ft. S, NW cor. NW NW Sec. 24-2s-8w	Set 10-in. 40 ft.
Trapp & Turnbow's (was Trapp Oil Synd.) No. 1 Long-Bell Lbr. Co., Sec. 26-2s-10	Rigging up.
Trapp & Turnbow's No. 1 S. T. Roberts, 150 ft. S and E, NW cor. NW NE Sec. 6-3-10	Location.
BIENVILLE PARISH	
Granver Oil Co.'s No. 1 T. J. Lawhon, 150 ft. N and W, SE cor. NE SE Sec. 15-16-8	Derrick.
M. H. Marr et al's No. 1 Caldwell, 450 ft. E, 150 ft. N, center Sec. 23-16-5	S.D. fuel 3,940 ft.
R. S. Ross et al's No. 1 W. M. Beck, NE NE Sec. 3-18-3	Rig up.
Texana Oil Co.'s No. 1 Lawson, 150 ft. W, 600 ft. S NE cor. NW NE Sec. 28-16-9	S.D. 1,025 ft.
BOSSIER PARISH	
Breazelle & Steckoll's No. 1 Nattin, C SW NE, Sec. 15-22-14	S.D. 3,013 ft.
Breazelle & Steckoll's No. 2 Nattin, 300 ft. S and W, NE cor. NW NE Sec. 22-22-14	Moving in rig.
Cryer Oil Co.'s No. 1 fee, 2,400 ft. N, 1,080 ft. E, SW cor. Sec. 25-19-13	S.D. 1,000 ft.
Gibson Oil Co.'s No. 1 G. C. Lyon, C SE NW Sec. 34-20-14	Derrick pattern.
A. W. Phillips, tr.'s No. 1 Oden, 300 ft. W, 150 ft. N, SE cor. NW NW, Sec. 4-18-13	S.D. 1,017 ft.
CLAIBORNE PARISH	
Leue Oil Co.'s No. 1 Kiner, Sec. 2-21-7	T.A. 2,500 ft.
A. W. Phillips, Tr.'s No. 1 Jehu Knighton, 330 ft. N, 330 ft. E SW cor. NE SE, Sec. 31-20-7	Moving in rig.
United Gas Public Service Co.'s No. 1 Meadows, approximately 100 ft. S, center E½ E½ Sec. 13-21-5	Set 9⅝-in. 3,880 ft; coring 4,000 ft.
United Gas Public Service Co.'s No. 1 Temple, 1,340 ft. W, 660 ft. N, SE cor. Sec. 21-23-7	Cmtd. 15-in. 254 ft; drlg. 1,833 ft.
Webster Oil Co.'s (was Robertson & Aurand) No. 1 Smith, 300 ft. S and E, NW cor. SE NE Sec. 2-21-7	Shale 1,780 ft; S.D.
DE SOTO PARISH	
Baggett et al's No. 1 Moore, 330 ft. S, 330 ft. W NE cor. NW, Sec. 1-13-15	Set 10-in. 60 ft.; S.D.
Coker et al's No. 1 Boone, 300 ft. N and W, SE cor. SW NW Sec. 13-10-11	Set 10-in. 60 ft.
C. O. Crockett's No. 1 C. E. Jenkins, SW cor. SE Sec. 5-12-11	Derrick.
Donley & Chastain's No. 1 H. Smith, 325 ft. W, 600 ft. N, SE cor. Sec. 31-14-15	S.D. 2,470 ft.
M. B. Gill's No. 1 W. J. Hill, 330 ft. N, 330 ft. E center Sec. 4-19-12	Began drlg. Dec. 1; cmtd. 12¼-in 111 ft.
Bailey Gantz et al's No. 1 Jenkins, NW cor. SE SW Sec. 35-13-12	Location.
Mrs. A. L. Ibach, tr.'s No. 1 Rambin, 250 ft. S and E, NW cor. NE NE Sec. 32-11-11	Cmtd. 6⅝-in. 2,350 ft; drlg. plug.
E. T. Oakes' No. 1 R. H. Bryant et al, 300 ft. N and W, SE cor. NE NW Sec. 30-13-15	Cored lime and shale 4,606 ft.; S.D. 4,609 ft.
DeSoto Dev. Co.'s No. 1 Nickey, Sec. 7-13-12	Partly rigged up and S. D.

(Continued on Page 58)

Drastic Reduction in California Crude Oil Price; To Make One More Effort for Curtailment

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Mar. 6.—The critical condition which has confronted California marketers for the past 30 days was climaxed March 5 by a substantial reduction in crude oil prices. This recession in prices follows an unsuccessful attempt of major companies to peg prices at their previous level and the failure of their constructive efforts can be attributed primarily to the usual irreconcilable minority of producers and a general deflection in curtailment work at Long Beach, Huntington Beach, and Kettleman Hills. The price reduction initiated by the Standard Oil Co. has been expected for several weeks but was probably precipitated by the banking moratorium and action of the Richfield Oil Co. last week in reducing prices paid for crude oil which it purchased from day to day.

The seriousness of the situation lies in the fact that unless operators immediately reduce production to the established allowable of 440,000 bbls. daily there is a strong possibility that major companies will ultimately discontinue further purchases of crude and operate exclusively with their own production. If such a condition materializes curtailment work will cease to be a stabilizing factor and must therefore disintegrate with disastrous results to all concerned.

If the curtailment program goes overboard the destinies of independent producers will go with it and only the strongest units can expect to survive. It is believed quite probable that the curtailment committee headed by Ralph Lloyd will make one more attempt to secure effective proration before the lid is definitely kicked off. Success or failure of this final attempt rests entirely with producers as the marketing situation will clear up within a short time if excess production now going into illegitimate channels can be eliminated.

Kettleman Hills

Directors of the Kettleman North Dome Association definitely approve of the tentative outline agreed upon last week whereby the outer, or blue line inclosing possibly productive acreage was reduced. Instead of changing the position of the blue line, directors plotted a third line, which will be designated as the brown line. The brown line incloses what appears to be potentially productive acreage at present. Acreage between the brown and blue lines will participate to the extent of 50 per cent and acreage inside the brown line, 100 per cent. Approximately 4,000 acres have been eliminated by relocation of the outer line in the North Dome. The red, or inner line, inclosing proven acreage was enlarged, while the new brown line in the extreme eastern and western ends of the structure was contracted. The revision in participating units in the association became effective February 1, although the final approval was not made until early this week. By-laws of the Association stipulate that the boundaries of the field must be definitely determined at the end of the fifth year of operation. The red, or inner line can be enlarged but cannot be diminished, in contrast with the outer line, which can be relocated once each year if developments warrant. The action of Kenda directors is particularly interesting in view of the possibility that deeper drilling may result in the development of commercial production in the Eocene which underlies the present productive Temblor. If Eocene production is ultimately developed it may necessitate a revision of both the red and the brown lines.

New Completion

The Standard Oil Co. chalked up a new well in the Kettleman North Dome Field when No. 58-29 J was brought in flowing 4,260 bbls. of exceptionally clean 35.5 gravity oil and 5,000,000 feet of gas per day from 8,534 feet, the hole having been finished with a 7-inch combination string carrying 1,076 feet of perforations and a 4¾-inch flow string. A week or so ago the Standard completed No. 67-19 J, located outside the original red line and theoretically increased the proven limits. This is the second well to be finished between the red and blue lines in the western part of the field, as the Kettleman North Dome Association had previously completed No. 58-20 J. Kenda and the Standard are each drilling one additional well outside the red line, the former's No. 30-20 J in Section 20-21-17 having topped the Temblor at 7,330 feet, while the latter's well topped the brown shale at 6,000 feet. The initial daily production of completions in the Kettleman North Dome Field does not necessarily indicate the maximum potential daily production, as operators are not particularly interested in establishing a high potential, the allowable daily production of the field being a pegged figure and not predicated on potential production. The Kettleman North Dome Field is capable of producing well in excess of 275,000 bbls. per day with all wells wide open, but operators have pegged the allowable daily production at 55,000 bbls.

The North Kettleman Oil & Gas Co. has resumed drilling operations in No. 1 Lillis-Welsh, an outpost in the extreme western part of the Kettleman North Dome, and it is the present intention to carry this hole down to the 11,000-foot level if necessary. No. 1 Lillis-Welsh is the most westerly well to be started in the Kettleman North Dome Field and, while the company failed to develop commercial production in the Temblor, it still has a chance of finishing a commercial producer in the underlying Eocene. Due to its location, outside the outer, or blue line, No. 1 Lillis-Welsh will be of far-reaching importance if it registers commercial production in the Eocene. The Union Oil Co. is rotating in No. 3 Amerada King in the Temblor at 7,320 feet, having recently picked up the top of the Temblor at 7,288 feet. The Kettleman Hills North Dome Royalty Syndicate has started work on another important project in the Kettleman North Dome Field and this well, like No. 1 Lillis-Welsh, will be carried to below 10,000 feet for a conclusive test. This new test is on the Barbour lease, situated rather well out on the north flank of the structure, and will consequently be of extreme importance if commercial production is developed.

Production Figures

Umpire Pemberton, in his production and curtailment review for 1932, has made available some pertinent data with respect to the production of crude in California. For some reason or other, California operators have been more or less reluctant in the past to release production figures for general dissemination. This resume shows that the Standard Oil Co., with a potential daily production of 216,317 bbls., actually produced 84,554 bbls. per day during 1932. The Shell, with a potential of 103,339 bbls., produced 47,366 bbls. per day; Union, with a potential of 94,713 bbls., produced 43,433 bbls. per day; Associated, with a potential of 91,133 bbls., averaged 32,334 bbls.; General Petroleum, with a potential of 46,943 bbls., produced 21,321 bbls.; The Texas Company, with a potential of 37,974 bbls., produced 23,462 bbls., and Richfield, with a potential daily production of 23,174 bbls., produced 14,994 bbls. per day during 1932. Of the larger independent units, the Chanslor-Canfield Midway Oil Co., with a daily potential of 19,649 bbls., actually produced 10,238 bbls. per day during 1932, followed by the Continental, with a potential of 16,234 bbls. and a production of 8,699 bbls., Belridge Oil Co., with a potential of 13,297 bbls. and an actual of 6,547 bbls. and the Barnsdall, with a potential of 10,814 bbls. and an average daily production of 6,424 bbls. The Superior Oil Co., George F. Getty, Inc., Honolulu Consolidated, Pacific Western and Petroleum Securities were credited with daily potentials of 37,917 bbls., 11,178 bbls., 13,994 bbls., 15,174 bbls., and 8,057 bbls., respectively. The average daily production of these companies in the order named were 7,831 bbls., 7,129 bbls., 4,559 bbls., 9,148 bbls. and 4,371 bbls. The Kettleman North Dome Association had a rated daily potential of 103,327 bbls. and an actual daily average production during 1932 of 25,471 bbls.

Mountain View

The Mountain View, or Weed Patch Field, in the extreme southern part of the San Joaquin Valley, is back in the spotlight after a dormancy of about two years and it begins to look as though this field will make its appearance in the production column this year. Two new wells have been started, one of which, No. 1 Hood of the Mohawk Petroleum, is already drilling. The second well, Dan Hogan's No. 1 Wharton, is expected to be spudded during the next few days. Attention was originally focused on the Mountain View, or Weed Patch district by the Shell a few years ago when No. 1 Porter Day came in on a preliminary production test flowing at the rate of approximately 2,500 bbls. per day. Immediately upon completion of the preliminary production test, the Shell resumed drilling operations to make a deep test, with the result that the discovery well was never officially completed. Deep drilling proved unsuccessful and while an attempt was made to plug back and recomplete No. 1 Porter Day, this work was unsuccessful. The Shell has leased practically all of what appears to be the maximum potentially productive acreage in the Weed Patch area and will be obliged to start several strings of tools within a short time after completion of a commercial producer.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	February 18		February 11			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic—						
Crude oil	78,085	11,155	.....	.....	78,085	.....
Fuel oil	.....	.....	.....	.....	74,775	.....
Diesel and gas oil	100,770	14,396	.....	.....	622,224	.....
Gasoline	73,795	10,542	.....	.....	879,767	698,745
Kerosene	.....	.....	80,535	11,505	330,665	.....
Foreign exports—						
Crude oil	191,545	27,364	67,967	9,710	1,041,020	1,327,834
Fuel oil	70,178	10,026	.....	.....	920,689	1,354,793
Diesel and gas oil	16,369	2,338	10,729	1,533	410,143	371,333
Gasoline	.....	.....	132,765	18,966	810,161	1,516,310
Kerosene	.....	.....	.....	.....	266,841	342,467
Naphtha distillates	.....	.....	.....	.....	.....	41,175
Coastwise-domestic—						
Crude oil	364,137	52,020	175,911	25,130	1,466,551	2,197,286
Fuel oil	341,564	48,795	283,412	40,487	1,758,680	2,380,994
Diesel and gas oil	70,978	10,140	87,216	12,459	327,533	326,509
Gasoline	180,446	25,778	308,988	44,141	1,634,926	1,775,861
Kerosene	.....	.....	2,193	313	19,947	27,900
Naphtha distillates	.....	.....	.....	.....	27,651	.....

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	77,055	11,008	.....	.....	280,531	.....
Gasoline	.....	.....	78,212	11,173	78,212	68,101
Kerosene	.....	.....	68,860	9,837	222,930	.....
Lubricants	.....	.....	.....	.....	.....	7,849
Foreign exports—						
Crude oil	127,538	18,220	36,675	5,239	320,286	174,227
Fuel oil	.....	.....	.....	.....	129,709	380,408
Diesel and gas oil	142,601	20,372	.....	.....	297,954	110,462
Gasoline	.....	.....	194,898	27,843	790,184	585,354
Kerosene	9,875	1,411	.....	.....	149,018	185,350
Lubricants	.....	.....	.....	.....	13,072	8,225
Coastwise-domestic—						
Fuel oil	62,831	8,976	48,981	6,997	336,051	418,360
Diesel and gas oil	82,671	11,810	16,667	2,381	116,805	116,819
Gasoline	113,464	16,209	114,793	16,399	554,039	568,708
Kerosene	4,006	572	2,848	407	21,807	10,857

Edison-Sivert District

The Edison-Sivert district, a few miles northeast of the Weed Patch area and approximately 5 miles southeast of Edison in Kern County, is apparently destined to be given a thorough going over during the next few months. Two new wells have already been started in this district and both should begin making hole within a few days. In Section 20-30-30, A. T. Jergins is rigging up rotary equipment, while E. A. Bender is rigging up for early work in Section 19-30-30.

General Petroleum developed some small heavy production in the Edison district a few years ago. General Petroleum's test at Edison, a few miles northwest of present drilling in the Sivert area, failed to prove commercially productive and drilling operations were suspended after an exhaustive production test. The Descanso Oil Co. is preparing to resume drilling operations on its wildcat in the Wheeler Ridge district, in the extreme southern part of the San Joaquin Basin, following a suspension of several months at 2,620 feet.

Round Mountain

The Chanslor-Canfield Midway Oil Co. has officially completed No. 6 in Section 6-28-29 in the Round Mountain

Field of Kern County as a 262-bbl. well from 1,678 feet. This completion, finished with a 9-inch liner carrying 35 feet of perforated, was brought in on the beam. The Petroleum Securities has been experiencing some difficulty in completing No. 4 Coffee, but it should be given a pumping test during the next few days. In the Mount Poso Field, the Shell has concluded drilling operations on No. 3 Glide in Section 15-27-28 and this well will be brought in on the beam pumping from 1,625 feet. The Pacific Coast Division Oil Co. has already passed the 1,200-foot level in No. 1, located in Section 14-27-27, and should make a production test within 10 days. The Union Oil Co. is rigging up rotary equipment in No. 1 Keene, in the Midway Field of Kern County, and spud is expected to be made within 10 days. The Western Gulf Oil Co. has completed No. 1 Simpson in the Fruitvale Field of Kern County, the best completion in this field for several months. No. 1 Simpson, bottomed at 4,111 feet and finished with a 4¾-inch liner including 168 feet of perforated and 3,867 feet of 2½-inch tubing, showed an initial daily production of 950 bbls. of 21.9 gravity oil. The production of this well was cut back to 280 bbls. by reducing the bean to twelve-sixty-fourths-inch. There is very little work under way in the Fruitvale Field of Kern County. The period of flush production was passed last year. The Milham Exploration Co. is doing a little reconditioning work in the Buttonwillow gas field and is plugging back No. 41-17 due to water trouble.

Lost Hills-Belridge

The Ohio Oil Co. is expected to make a production test on No. 1 Bloemer, a deep well in the North Belridge Field of Kern County, during the next few days. It had been the original intention to make a flow test on this well early in the week. Some 15 or 20 operators and scouts were disappointed. This well is important because if commercial production is developed in the Eocene and the well allowed to remain on production, operators holding adjacent acreage will be obliged to drill a number of offsets. If the saturated condition of the oil sand logged in No. 1 Bloemer at 8,450-8,525 feet and the heavy gas pressure encountered is any criterion, this well should register substantial production. In the Lost Hills Field of Kern County, the Associated is in a hard shale at 2,503 feet but still has another 1,500 feet of hole to make before landing another string of pipe. This well, No. 1 Williamson, is being drilled by the Associated in conjunction with other operators holding adjacent acreage, and is expected to prove a conclusive test as tentative plans call for deep drilling if necessity demands.

San Miguelito

Another well is expected to be spudded in at San Miguelito within 10 days as the Chanslor-Canfield Midway Oil Co. has started rigging up rotary equipment in No. 3-A Hobson to be drilled in Section 23-3-24. Two wells are already drilling in the San Miguelito Field, the Continental having spudded in No. 2 Grubb several days ago. The other drilling project under way is No. 1 Valenzuela of the Honolulu Consolidated, which is approaching the 5,000-foot level. The Indian Petroleum Corp. finished No. 1 Shudde on tideland permit No. 82 in the Rincon Field of Ventura County, pumping 100 bbls. of exceptionally clean 30.3 gravity oil, but took the well off the beam and will proceed to drill in search of deeper production. The Woodrow Oil Co. is making preparations to test a few minor showings found in No. 1 Lomas at 6,343 feet, but the outlook is not too promising. The Associated will probably complete No. 130 Lloyd in the Ventura Avenue Field within 10 days, as the hole, bottomed at 7,579 feet, is being reamed out preparatory to landing a string of casing. The General Petroleum is approaching the 6,500-foot level in No. 15-A Barnard, scheduled for completion in the deep 57 zone at Ventura Avenue, but still has over 1,500 feet of hole to make before reaching completion depth. The General Petroleum is rigging up rotary equipment for a resumption of drilling operations in No. 9 Notten, a former producer at 5,970 feet. The General Petroleum has taken unusual precautions in drilling No. 15-A Barnard, which is expected to be completed in the deep 57 zone in the Ventura Avenue Field around the 9,000-foot level. To prevent mechanical trouble resulting from stuck drill pipe, the company has rigged up a double drawworks, one on each side of the derrick platform. This installation, somewhat unusual, is expected to prevent the sticking of drill pipe, a common occurrence in this field, unless unusual precautions are taken. The Bolsa Chica Oil Co. is building a new rig for another test to be drilled on tideland permit No. 191 in the Coal Oil Point district of Santa Barbara County, located about 3 miles east of the Elwood Field, and spud will probably be made within 15 days. The first test drilled on this tideland permit was dry in both the Vaqueros and Sespe formations, although a sufficient amount of promising sand was cored in the Vaqueros to justify the expectation of getting production. To make a definite conclusive test, the Bolsa Chica Oil Co. recently consummated a deal with J. J. Doyle to drill a second test 400 feet north of No. 1.

Long Beach

The Long Beach Field has become more active during the past few months and, while most of the work under way is reconditioning jobs, or attempts to rejuvenate production by corrective work, the present scope of drilling justifies expectation that completions in the next 90 days will be a little more frequent. Four wells were put on production during the week, three of which were recompletions. The Hancock Oil Co. completed No. 31 Signal pumping 121 bbls. of 27.8 gravity oil per day from 5,200 feet, after finishing the hole with a 4¾-inch perforated liner, but the output is cutting approximately 10 per cent. The West American Oil Co.'s No. 10 Long Beach, bottomed at 4,997 feet and finished with a 5-inch liner including 411 feet of perforated, was good for 159 bbls. of clean 29.1 gravity oil per day on the beam. D. D. Dunlap brought his No. 2 Signal in on the beam pumping 140 bbls. of 26.8 gravity oil per day following completion of a reconditioning job which plugged the hole back from 6,181 feet to 5,417 feet. J. W. Dietzel's No. 1 Gordon, finished at 4,905 feet, was returned to production pumping 149 bbls. of 26.7 gravity oil which showed a cut of approximately 20 per cent.

Seal Beach

The Standard Oil Co. completed No. 20 San Gabriel in the Seal Beach Field of Los Angeles Basin, but it was somewhat of a disappointment as it was good for only 212 bbls. of 31.5 gravity oil per day. Previous to completion, the hole was plugged back from 6,375 feet to 6,330 feet with a 4¾-inch liner carrying 168 feet of perforated. The Universal Consolidated is making good footage in No. 1 Cruz, a projected deep test in the extreme eastern part of the Montebello Field, but it will probably be 60 days before the bit is deep enough to pick up the Miocene. The Union Oil Co. started drilling operations on a new well, No. 3 Vidor, in the Playa Del Rey Field late this week. On the Del Rey lease the company is redrilling in No. 5 at 5,843 feet. The Standard is making preparations to start two new wells in the West Coyote Field, one of which, No. 53 Emery, should be spudded in within a few days. On the Murphy Coyote lease in this field, the company has started rig construction for the derrick to be used in the drilling of No. 113. There was not much change in the status of development in the Huntington Beach Field, although Macroo Oil Co. spudded in No. 1 Smith in the Seventeenth Street town lot area, where several good wells have recently been completed. The Texas Company has started making new hole in No. 1 Steiner, a former upper zone producer in the Richfield district of Los Angeles Basin, which should be ready for a production test within 30 days. Otis Hoyt and the Forward Petroleum Corp. chalked up normal footage in their respective tests during the week. The C. C. Harris Oil Co. is abandoning 18 additional shallow producers in the old Los Angeles City Field, due to depletion and excessive production costs. This company abandoned approximately 20 old wells in this field late last year and will, within a short time, have either abandoned or disposed of these old wells, most of which were drilled many years ago. The Gilmore Oil Co. and the Associated Oil Co. have likewise abandoned their producing wells in the area adjacent to Beverly and Fairfax Avenues in Los Angeles. The former has also dismantled its small refinery on Gardner Street between Third Street and Beverly Boulevard.

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.	T.	R.	Depth	Status—
Hines Pet., No. 1 Ocean Park, Los Angeles Co.	8-	2-15		7,414	suspended
Taylor Oil Co., No. 1 Culver, Los Angeles Co.	12-	2-15		6,258	suspended
Palm Ridge Oil Co., No. 1 Palms, Los Angeles Co.	1-	2-15		3,401	cleaning out
Pan Tex Oil Co., No. 1 Lawndale, Los Angeles Co.	20-	3-14		4,401	sd. sh. drilling
Baldwin Oil Co., No. 9 Inglewood, Los Angeles Co.	7-	2-14		5,863	suspended
Kupfer, A. M., No. 1 Inglewood, Los Angeles Co.	17-	2-14		4,440	gr. sh. drilling
Pacific Gulf, No. 1 Athens, Los Angeles Co.	19-	3-13		5,492	gr. sd. drilling
Pacific Oil Inv. Co., No. 1 Wilmington, Los Angeles Co.	28-	4-13		3,014	suspended
Wilmington Oil Co., No. 1 Wilmington, Los Angeles Co.	28-	4-13		2,041	suspended
Jones, W. L., No. 1 Lyndwood, Los Angeles Co.	31-	2-12		4,480	cleaning out
Universal Consd., No. 1 Montebello, Los Angeles Co.	5-	2-11		446	deep test
Willetts Pet., No. 1 Saugus, Los Angeles Co.	35-	5-16		1,904	remov. debris
Smith, J. A., No. 1 Saugus, Los Angeles Co.	32-	5-17		3,515	suspended
Alpha Oil Co., No. 1 Saugus, Los Angeles Co.	22-	1-18		rig	rigging up
Hudson Pet., No. 1 Newhall, Los Angeles Co.	1-	3-16		912	sd. sh. drilling
Garliepp, F. J., No. 1 Newhall, Los Angeles Co.	14-	3-16		496	sd. sh. drilling
Ball, W. T., No. 1 Newhall, Los Angeles Co.	34-	3-16		3,582	suspended
Big Four Oil Co., No. 1 Newhall, Los Angeles Co.	32-	4-16		2,020	gr. sd. drilling
Marble, Willard, No. 1 Van Nuys, Los Angeles Co.	6-	2-16		1,981	gr. sd. drilling
Nuoil Co., No. 1 Newport, Orange Co.	29-	6-10		3,660	br. sh. drilling
Mineral Exploration, No. 1 Capistrano, Orange Co.	8-	8-	7	4,302	cemented
Placentia Dev. Co., No. 1 Placentia, Orange Co.	31-	2-	9	rig	rigging up
Spindletop Oil Co., No. 1 Salton Sea, Riverside Co.	25-	7-10		3,590	suspended
Keeley, H. J., No. 1 Corona, Riverside Co.	21-	4-	6	613	sd. sh. drilling
Duncan, N. I., No. 1 Sagebrush, Riverside Co.	8-	4-	6	1,157	suspended
Great American Pet., No. 1 Chino, San Bernardino Co.	18-	2-	8	1,509	cleaning out
Mason Oil Co., No. 1 Salton Sea, Imperial Co.	1-17-15			680	suspended
Woods, D. H., No. 1 Salton Sea, Imperial Co.	7-11-16			774	suspended

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.	T.	R.	Depth	Status—
Meganos Oil Co., No. 1 Lompoc, Santa Barbara Co.	28-	8-34		....	material
Smith, E. W., No. 1-A Purisima, Santa Barbara Co.	18-	7-34		rig	rigging up
Duell, O. S., No. 1 Naples, Santa Barbara Co.	7-	4-29		5,132	suspended
Equity Oil Co., No. 1 Coal Oil Point, Santa Barbara Co.	24-	4-29		3,750	suspended
Bolsa Chica, No. 1 Coal Oil Point, Santa Barbara Co.	tideland			4,089	suspended
Bolsa Chica, No. 2 Coal Oil Point, Santa Barbara Co.	tideland			mtl.	building rig
Cuyama Oil Co., No. 1 Cuyama, Santa Barbara Co.	12-10-27			2,387	suspended
Woodrow Pet., No. 1 Rincon, Ventura Co.	4-	3-24		6,351	will test
Indian Pet., No. 1 Rincon, Ventura Co.	tideland			2,115	to deepen
Commander Oil Co., No. 1 Fillmore, Ventura Co.	13-	4-19		2,400	oil sand
Hancock Oil Co., No. 1 Fillmore, Ventura Co.	13-	4-19		1,232	suspended
Honolulu Consolidated, No. 1 Miguelito, Ventura Co.	23-	3-24		4,870	hd. sh. drilling
Continental, No. 2 Miguelito, Ventura Co.	23-	3-24		943	sd. sh. drilling
C.C.M.O., No. 3-A Miguelito, Ventura Co.	23-	3-24		mtl.	building rig
Macrate, A. N., No. 1 Ojai, Ventura Co.	27-	4-23		2,071	br. sh. drilling
Wilshire Oil Co., No. 1 Sulphur Mountain, Ventura Co.	20-	4-21		1,703	br. sh. drilling
Mosher, J. W., No. 1 Santa Paula, Ventura Co.	22-	4-21		913	br. sh. drilling
Hardison & Temple, No. 1 Timber Canyon, Ventura Co.	22-	4-21		248	suspended
Duell, O. S., No. 1 Timber Canyon, Ventura Co.	31-	4-20		rig	rigging up
Petro Producing Co., No. 1 Timber Canyon, Ventura Co.	18-	4-20		2,482	cleaning out
Los Posas Pet., No. 1 Los Posas, Ventura Co.	22-	3-20		1,010	sd. sh. drilling
Wilshire Oil Co., No. 1 Bardsdale, Ventura Co.	12-	3-20		1,560	Sespe form.
International Oil Developers, No. 1 Conejo, Ventura Co.	33-	2-20		2,682	hd. sd. drilling
Anderson, C. L., No. 1 Santa Susana, Ventura Co.	36-	3-18		531	sd. sh. drilling
Purman, T. H., No. 1 Gould Hills, Kern Co.	32-29-21			6,399	recemented
Purman, T. H., No. 2 Gould Hills, Kern Co.	27-29-21			298	sd. sh. drilling
General Pet., No. 1 Belridge, Kern Co.	30-28-21			3,360	suspended
Cumberland Oil Co., No. 2 Devil's Den, Kern Co.	17-26-18			3,270	suspended
Holloway, A. S., No. 1 Devil's Den, Kern Co.	11-25-18			1,848	suspended
Hanna, Tom, No. 1 Devil's Den, Kern Co.	25-25-18			3,516	suspended
Pyramid Hills Oil Co., No. 1 Devil's Den, Kern Co.	24-25-18			3,161	hd. sd. drilling
Fowler, F., No. 1 Blackwell Corner, Kern Co.	15-26-19			3,170	suspended
Ohio Oil Co., No. 1 Belridge, Kern Co.	36-27-20			8,525	cemented
Associated, No. 1 Lost Hills, Kern Co.	2-26-20			2,503	sd. sh. drilling
Seminole Oil Co., No. 1 Lost Hills, Kern Co.	29-25-21			rig	suspended
Bender, E. A., No. 1 Edison, Kern Co.	19-30-30			rig	rigging up
Jergins, A. T., No. 1 Edison, Kern Co.	20-30-30			rig	rigging up
Mohawk Pet., No. 1 Weed Patch, Kern Co.	30-30-29			1,040	sd. sh. drilling
Hogan, Dana, No. 1 Weed Patch, Kern Co.	32-30-29			rig	rigging up
Descanso Oil Co., No. 1 Wheeler Ridge, Kern Co.	31-11-19			2,620	resumed work
Kingsburg Expl. Co., No. 1 Kingsburg, Fresno Co.	30-16-23			2,970	suspended
Bergman, Harry, No. 1 Kingsburg, Fresno Co.	12-12-11			2,273	sd. sh. drilling
Graham & Loftus, No. 1 Raisin City, Fresno Co.	30-15-18			3,560	recemented
Emerich Oil Co., No. 1 Mendota, Fresno Co.	35-13-13			....	material
Kent & McDonald, No. 1 Carrizo Plains, S. Luis Obispo Co.	3-32-22			3,815	cleaning out
Emerich Oil Co., No. 1 Carrizo Plains, S. Luis Obispo Co.	22-32-22			1,841	suspended
Paso Robles Oil Co., No. 1 Edna, San Luis Obispo Co.	27-27-11			4,191	suspended
Shell, No. 1 San Miguel, San Luis Obispo Co.	4-25-12			5,212	hd. sd. drilling
Pacific Inland, well No. 1, Monterey Co.	19-23-15			2,441	suspended
Thomas Pet., No. 1 Parkfield, Monterey Co.	31-22-14			1,011	suspended
Guess, E. B., No. 1 Corcoran, Kings Co.	7-21-21			6,197	suspended
Brown, A. M., No. 1 Cloud, Kings Co.	10-23-19			rig	suspended
Dudley Dome Oil Co., No. 1 Dudley Ridge, Kings Co.	9-23-20			3,012	suspended
Knudsen & Schmidt, No. 1 Reef Ridge, Kings Co.	36-23-17			6,801	br. sh. drilling
Kettleman Ridge Oil Co., No. 1 Avenal, Kings Co.	10-23-16			rig	rigging up
Magee & Stone, No. 1 Alpaugh, Kings Co.	34-24-22			5,060	suspended
Inland Valley Oil Co., No. 1 Visalia, Tulare Co.	24-17-24			2,092	suspended
Napa Oil Co., No. 1 Griffith, Napa Co.	7-	8-	3	3,273	suspended
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	5-	2-10		4,813	suspended
Rushing Oil Co., No. 1 Waterford, Stanislaus Co.	20-	3-13		2,653	sd. sh. drilling
Pacific Northern Oil Co., No. 1 Guinda, Yolo County	23-12-		3	3,045	suspended
Buttes Oilfield's Co., No. 1 Marysville, Sutter Co.	35-16-		1	2,731	gas, shut in
Buttes Oilfields Co., No. 2 Marysville, Sutter Co.	34-16-		1	....	grading
Tehama Pet. Co., well No. 1, Tehma Co.	4-22-15			2,040	gas showing
Orland Synd., No. 1 Orland, Tehama Co.	31-23-		3	3,420	sd. sh. drilling
Marker Drlg. Co., No. 1 Orland, Tehama Co.	21-25-		5	3,030	cleaning out

Mission's Improved Valve Contains Only Five Parts

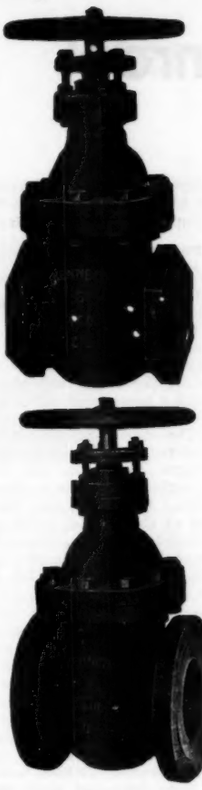
Through an error in an advertisement of the Mission Manufacturing Co. in The Oil and Gas Journal's issue of February 16, a cut was run showing the Mission valve as marketed prior to 1930. This cut showed seven parts, while the valve as it has been marketed since 1930 has only five parts.

The Mission Manufacturing Co. is continually improving its products and is simplifying them by reducing the number of working parts everywhere possible. Following this policy it has reduced the present Mission valve to a minimum of working parts. This correction is made in order that the oil operator may know of the improvements made in the Mission valve. The Mission valve has undergone no fundamental change since the reduction of parts in 1930, other than a continual improvement in materials used, in line with the latest findings of metallurgists.

A. S. CORIELL DIES

Abner Smalley Coriell, aged 51, general agent and eastern representative of the Standard Oil Co. of California, died of a heart attack in his home, Elizabeth, N. J.

Specially Designed for Oil and Gas Service



IN oil and gas fields, refineries, pump houses, and on pipe line systems, these Kennedy 400-lb., 700-lb., 1000-lb. and 1600-lb. test Gate Valves have a wide application.

Their heavy proportions, sound, strong metal, large disc-seating surfaces, unobstructed full opening, provisions for maintaining position of seat rings, gaskets, and packing, and perfect seating of disc are some of the features that assure efficient, trouble-free operation.

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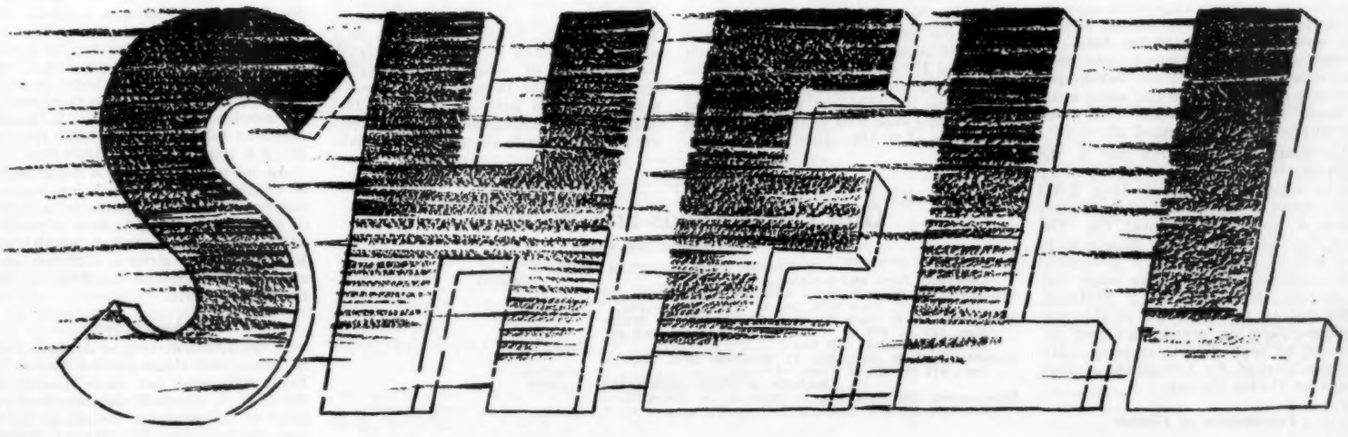

Second Good Producer Completed in Buckeye; Sharp Increase in Completions at Conroe

By NEIL WILLIAMS
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Mar. 6.—Although the active leasing play which has been going on along the Gulf Coast received a temporary setback due to the banking situation, new wildcat drilling development indicated no further abatement with a number of new operations starting up. Developments in the Conroe Field were marked by a sharp increase in the number of completions and a substantial gain in the daily production due to a boost in the daily allowable effective March 1. In the new, deep Buckeye Field in Matagorda County, the bringing in of a second good producer proved the area to be an important pool.

In the latter district the new producer was United North & South Development Co.'s No. 1 St.L.&B.M., which is some 1,200 feet north of the discovery well brought in last September and is estimated good for at least 2,000 bbls. daily, the initial production being at the rate of 80 bbls. per hour through a one-half inch choke. The production is from the same deep sand as that in the first well and bottom of the hole is at 7,858 feet, where 108 feet of 5-inch screen was set. This is the deepest production on the Gulf Coast.

Bottom of the hole in the discovery well, No. 1 Stoddard, was 7,926 feet (plugged back from 7,951 feet), but the difference in depths of that well and the present producer might be accounted for in the fact that the former had several sidetracking jobs and the hole might have been more crooked. That well recently was killed because of the increase in water production and the hole has been plugged back up into the casing preparatory to a sidetracking job back to the sand. In the time it was allowed to flow the well made over 100,000 bbls., although pinched down due to proration. The water in that well is not looked upon seriously as it is believed the water merely broke through the packers with which the bottom had been plugged off.

Locations of these wells are in the Buckeye townsite, which is a part of an almost solid block of more than 8,000 acres owned in its entirety by the United North & South Development Co. The block has been divided into 20-acre units and will be developed on a systematic and conservative basis. One other test is drilling, this being No. 2 Stoddard, 1,000 feet to the northeast of the new producer. Another location has been announced for early drilling as being 1,210 feet southeast of No. 1 Stoddard on land owned by Doctor Plotner.

Completions at Conroe

At Conroe 20 new wells were completed and at the close of the week 29 additional tests were in the sand and either in process of completion or standing with casing cemented preparatory to bringing in. Among completions was Strake Petroleum, Inc.'s No. 1 Keystone Mills, southwestward extension, which has plugged back to 5,103 feet from a former total depth of 5,121 feet. At the latter depth it was in the water. After plugging it came in flowing at the rate of 125 bbls. of pipe line oil daily through a one-half inch choke, with a pressure of 750 pounds.

Production on the north side of the field was extended a location northward by Tide Water Oil Co.'s No. 2 Freeman, which came in flowing at the rate of more than 85 bbls. per hour through a three-eighths inch choke with bottom of the hole at 5,137 feet. Location is in the John Davis Survey on the 36-acre tract. The first Freeman well, drilled by Heep Oil Corp., was the second oil producing well in the field.

Of interest at Conroe will be another wildcat test to be drilled by Strake Petroleum, Inc., southwest of production. Definite location has not been made known but it will be either in the extreme southwest corner of the Dean tract, W. C. C. Lynch Survey, on the San Jacinto River, *or* across the river in the R. Vince Survey. Such a location would be a mile and a half southwest from the nearest well or drilling operation. This is over a mile and a half to the south and a little east of the same operator's No. 1 Elizabeth Moody, another wildcat which was abandoned as dry a couple of weeks ago after drilling to a total depth of 5,515 feet.

Alpha Oil Co.'s No. 1-C South Texas Development Co., a semiwildcat located on the extreme east side of the field in the T.&N.O. Survey, has picked up saturated oil sand and at a total depth of 5,133 feet is standing cemented. Sun Oil Co.'s No. 1 Foster, south extension test, in the John Bricker Survey, late in the week was coring sand below 5,045 feet. It is a half mile west and a little south of Gulf Coast Drilling & Producing Co.'s No. 1 Keystone Mills, A. S. James Survey, the present most southerly well. The latter is one of those outpost wells which are producing from the upper Conroe sand, which sand over the main part of the Conroe Field carries only gas.

Increased Allowable

The increase in the allowable production of Conroe from 18,500 bbls. to 35,000 bbls. daily went into effect March 1, and under the new order wells on 20-acre units are permitted a boost in their daily output of 176 bbls. daily. For the period immediately preceding March 1, the maximum was 100 bbls. per well. The new order allows each well in the field a base production of 20 bbls. daily with an additional acreage allowance. The present per acre allowance is 7.8 bbls. daily. New wells completed in any period are permitted the maximum allowance of a 20-acre unit. There now are over 235 producing wells in the field. Harrison & Abercrombie's No. 1 Alexander, which is producing from a 150-foot crater, into which the well caved, still is making better than 2,000 bbls. daily, the oil being pumped from the lake into storage.

Huffsmith Area

In the Huffsmith area, 15 miles to the southwest of Conroe in northern Harris and southern Montgomery County, Mills Bennett Production Co. has abandoned as dry its No. 1 Klepple, March Survey. The test, which was much watched in view of the very active leasing play which has been taking place in that area and extending across northern Harris County, was drilled to a total depth of 6,017 feet. That general district also chalked up another dry hole in Mound Creek Oil Co.'s No. 1 John Sealey, in the John Sealey Survey, southern Montgomery County. It, however, is some 6 or 7 miles north of the Bennett dry hole.

The next move at Huffsmith is undetermined at this time. The area, including the Tom Ball district to the southwest and all that part of the county and southern Montgomery County, has been the "hottest" wildcat leasing spot on the Gulf Coast and much is at stake there with leases lately bringing proven acreage prices. Magnolia Petroleum Co. is reported as planning on a location on its magnometer block just west of the block owned by Mills Bennett Production Co. Another location was made about 3 miles east of the Bennett dry hole several weeks ago but nothing has been done on it and it is possible that the location will be moved. Several other locations are reported contemplated. Although the Bennett and Mound Creek tests were dry, as well as two others recently drilled in southern Montgomery County, the showings of gas encountered last autumn in Indian Hill Oil Co.'s No. 1 Schweinle, William White Survey, and which first attracted attention to the area, are taken as indicative of something existing in that district. The Bennett test is some 3 miles south and west of the Indian Hill well and the Montgomery County tests are several miles to the north. The showings encountered in the Indian Hill well were in the same horizon as that from which the Conroe Field is producing.

Port Barre Dome

The Texas Company has completed a good well in its No. 14 Botney Bay on the north side of the Port Barre Dome, St. Landry Parish, Louisiana. In a sand at a total depth of 3,239 feet the well came in flowing at the rate of more than 1,470 bbls. daily through a three-eighths-inch choke with a pressure of 400 pounds. It is the best well so far completed in that sector. The same company also has recently completed another good well on its Lake Barre Dome, in the coast marshes of southern Terrebonne Parish. This was No. 17 State-Lake Barre, which flowed at the rate of 2,500 bbls. daily, 660 pounds pressure, through a one-half-inch choke. The production is in a sand at a total depth of 3,733 feet underlying a salt overhang.

Ariola

Houston Oil Co. has definitely abandoned its "Y-1" Ariola fee at Ariola, Hardin County. This test, an offset to the discovery well and to date the only producer in the field, was drilled to a total depth of 6,246 feet. The discovery well, completed the middle of last year, still is making around 50 bbls. net oil daily with a large volume of water. Four dry holes have been drilled since the bringing in of that well.

Iowa

Shell Petroleum Corp.'s No. 1 Stafford, east extension test for the Iowa Field, on the Calcasieu-Jefferson Davis Parish line, has picked up a sand showing oil at 5,376 feet and cored 1 foot in. A test is to be made. The field is producing from a deeper sand at 6,800-6,960 feet.

Cameron Parish

Magnolia Petroleum Co. is drilling deeper at 5,587 feet in hard sand in its No. 3 Cameron Meadows, southern Cameron Parish, Louisiana. This well, which made a short lived producer in sand at 5,273 feet, now will be watched in view of possible discovery of lower sands or dome formation. It is the third test on the geophysical prospect, No. 2 Cameron Meadows being a well at 5,270 feet, and No. 1 a small gasser at 3,650 feet.

An interesting wildcat is being started in Cameron Parish, this being Southern Sulphur Co.'s (E. F. Simms') No. 1 Gulf of Mexico, this being located in the Gulf of Mexico at the mouth of the Calcasieu River. Location given is 330 feet south and 338 feet east of the SW cor. Section 29-15s-10w.

Jackson County

In the Lolita district of Jackson County, lower Gulf Coast district, Texas, The Texas Company has made location for No. 1 I. N. Mitchell, 450 feet west and south of the northeast corner of the 63-acre tract in Lot 28, Clement Subdivision. This is just north of the town of Lolita and is on a geophysical block worked by that company.

Fort Bend County

Gulf Production Co. is resuming development at Orchard, Fort Bend County, and has rigged up for No. 35 Moore. This is the first new drilling there in several months. Pure Oil Co. also has made location at Lost Lake, Chambers County, for No. 17 Mayes, the first operation there in several months.

Gulf Coast Fields and Wildcats

Week Ending March 4

RACCOON BEND—AUSTIN COUNTY

Company, farm and location—	Remarks:
Humble O. & R. Co.'s No. 5 Diemar, 713 ft. from NE line, 3,000 ft. from NW line of Wm. Harvey Sur.	Location.
Humble O. & R. Co.'s No. 9-A Walton, W. C. White Sur., 150 ft. SW of N cor. of 50-ac. tract and 181 ft. SE parallel to NE line	Sandy shale 3,520 ft; cmtd. csg.
Humble O. & R. Co.'s No. 11 Woodley, Wm. Harvey Sur., 413 ft. out of S cor. of tract	Location.

DAMON MOUND—BRAZORIA COUNTY

Intercoastal Oil Co.'s No. 10 Wisdom, A. Darst Sur., 440 ft. from NW line, 170 ft. from SW line of tract	Heaving shale 3,978 ft; plugged to 3,705 ft; set 50 ft. of 2½-in. screen; swbd. some oil.
A. W. Speed's No. 1 D. F. Bryan, A. Darst Sur., 105 ft. from N line, 65 ft. from W line of lease	S.D. 1,051 ft.
Sinclair Prairie Oil Co.'s No. 31-A Bryan, 155 ft. N 45 deg. E of SW cor. of Blk. 28, Masterson Subd., and 140 ft. S 45 deg. E of Elmire Bryan tract in A. Darst Sur.	No report.
Sinclair Prairie Oil Co.'s No. 10 Masterson (W.O.), A. Darst Sur.	No report.
H. Wisdom's No. 1 Wisdom, 50 ft. from SE line, 75 ft. from SW line of Blk. 5, Lot A, A. Darst Sur.	S.D. 1,045 ft.

MANVEL—BRAZORIA COUNTY

Alpha Oil Co.'s No. 1 W. H. Nichols, H. M. Little Sur., 200 ft. W, 200 ft. N of SE cor. of tract	T.D. 5,880 ft; plugged to 3,740 ft; to sidetrack.
R. A. Gamble et al's No. 1 Sherwood, Lot 15, Allison-Richey Subd., H. N. Little Sur.	S.D. 4,125 ft.

(Continued on Page 61)

Salt Water Wells Dampen Enthusiasm in Saxet; Interest in Northern Duval County Area

By B. D. STEVENSON
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Mar. 6.—Two salt water wells slowed down enthusiasm in the Saxet Field over the 4,875-foot sand the past week and S.R.C., northeastern Webb County, got the sand at 905-908 feet at almost exactly the same depth as in the discovery Moca Oil Co. well, which is 1,069 feet south of it. It has set casing and will test. At the close of the week reports were awaited on several propositions that were about to test or were nearing interesting sand depths.

In the Saxet Field the Violet Oil Corp.'s No. 1 McGregor-Belk, a north offset to its No. 1 McGregor, made salt water and Shasta Oil Co.'s No. 1 McGregor, south offset to Violet's No. 1 McGregor, also made salt water. These tests are in the northwestern part of the field. Violet Oil Corp.'s No. 1 McGregor was the discovery well in sand 4,861-75 feet and came in for around 300 bbls. daily. Houston Oil Co., about 1,000 feet west, drilled its No. 2 McGregor and got a 400-bbl. well at about the same depth. Violet's north offset to its discovery well, had sand at 4,857-74 feet and has been working with it for two or three weeks. On drill stem test it made 5 fourbles of oil but when completed made too much salt water. It is barely possible that it may be made into something of a producer yet, since wells in that field have to be coaxed a good deal at times.

Shasta Oil Co.'s No. 1 Quiros, south offset to Violet's No. 1 McGregor, tested salt water at 4,867-75 feet and also at 4,882-88 feet and drilled ahead and at last reports had another sand at 4,919 feet which it was testing.

. These wells are 2 miles west of Oso Drillers' No. 3 Roark, completed last week for a big well in that sand and 2 miles north of Gibson Oil Co.'s No. 1 Rand Morgan, a 400-bbl. well in the same sand. This sand has been hit in other wells that have had showings in it but have gone on through it and it has looked for a time as though it might be the big producing sand of the field. The two salt water wells, of course, come far short of condemning it but raise the curiosity of operators as to just what the underground conditions are. There are some tests headed for this sand around Gibson's No. 1 Rand Morgan and the sand will probably be tested out in several other tests.

Wells in the Saxet Field are more than likely coming in for larger volume of oil than being reported, the reports being ultraconservative.

An important move in the field the last week was the purchase by the Texas Pipe Line Co. of the Coast Pipe Line Co. 7-mile line from the field to docks at Corpus Christi and including two 55,000-bbl. tanks at the docks on the deep water channel. The price was not made public. This is the first time that The Texas Company has got into the lower coast with its pipe line organization. The company has production in northern Duval County and some elsewhere which has been run by other pipe line companies. With the exception of the Atlantic's connection in Pettus and Tuleta, the only major pipe lines into the lower coast and Laredo territory have been the Magnolia and Humble. This acquisition at Saxet by The Texas Company is looked upon as the probable forerunner to further extensions that company may make into this part of Texas.

Northern Duval and Webb

S.R.C. Oil Co.'s No. 1 Duval County Ranch Co., in Share 3 of Zapata County school lands in northeastern Webb County, cored sand at 905-908 feet and tested eight joints of oil in three minutes and set casing. This test is 1,069 feet north and slightly east of Moca Oil Co.'s (Turnbull and others) No. 1 Duval County Ranch Co., which came in for about 100 bbls. of oil at the same depth. Moca's No. 2, drilled about 1,000 feet south and slightly east of No. 1, failed to get the same sand and drilled considerably deeper and was abandoned. Whisenant and Trenchard drilled their No. 1 about a mile east and a little north and got a dry hole. S.R.C. Oil Co.'s test should have been ready to drill in over the past week end.

This sand has been identified as the Cole sand, topped at around 1,567 feet in the North Government Wells Pool.

William B. Stewart's No. 1 Duval County Ranch Co. in Survey No. 362, 1 mile north and 1 mile west of the North Government Wells Field is waiting for casing and if it shows up as it did on the drill stem test will open a new pool. In sand at 1,566-76 feet it tested 10,000,000 to 15,000,000 feet of gas and a spray of oil in the Cole sand topping it at the same depth as in the Government Wells Pool though it is off a little to the northwest and seems to foreshadow a pool overlapping the North Government Wells Pool. Completion of a well by Stewart validates about 4,000 leases of the Magnolia Petroleum Co. from whom he obtained his acreage. What will be found in the Government Wells sand on this acreage will for a time remain an interesting and unsettled question till someone drills. However, Cole Petroleum Co. on a deal with Scott has set casing in No. 1 Kidd in Survey No. 55 about 2½ miles southwest of Stewart and in the same general trend and in the North Government Wells sand at 2,264 feet. It had quite a showing but has stood for a few weeks waiting for casing. It was about ready to test early this week.

Operators are leaning more and more to the old shore line theory rather than the fault idea in this part of north Duval County and the idea seems to explain things in many other sections of Southwest Texas. The Stewart and Scott wells may be on an anticline running parallel to the North Government Wells Field and lying west of it. If the shore line idea is correct the expectation is that there will be some fields that will broaden out much more than fields do on fault lines where they are very narrow and this thought is more encouraging to the operator.

Shasta's No. 1-B Peters in Survey No. 176 Duval County late in the week was at 2,400 feet and coring for the sand which was had in the discovery gas well at 2,431 feet and Smith & Hunter's No. 1 Olivarez in Survey No. 80 was coring below 2,250 feet. In each case it is the first test drilled since the bringing in of the discovery gas well. No. 1-B Peters is a little east of No. 1 Peters and 7 miles south of the Sarnosa Pool and the discovery gas well is producing from the Government Wells sand. No. 1 Olivarez is 7 miles east of the North Government Wells Field and producing from what is now generally believed to be a sand in the Frio and a little above the Cole sand. No. 1 Olivarez has passed that sand and information is not complete as to the showing. It is drilling for lower sands. No. 1 Pena, discovery gas well, has been used to fire the boiler for No. 1 Olivarez and has been making a little oil with the gas.

S.R.C. Oil Co.'s No. 1 Hagist in Survey No. 267 of Duval County has been abandoned below 2,300 feet. It is several miles north of the North Government Wells Pool. Other wildcats for the most part have made more hole following the Jackson play up through McMullen but developed nothing of importance.

Balcones Fault Zone

Operations in the Balcones Fault zone center around the search for Serpentine production in Bastrop and adjoining counties and especially the development of the Humble's new field and to the few Edwards lime tests that are under way. Humble has started two new tests on its Bastrop block and has location for the third, the tests being at some distance from the discovery well.

Marts and Beavens made two new locations, one for No. 1 Riddle, a little east of Ogden & Reed's No. 1 Riddle, completed late last year producing in the Serpentine, and also one for No. 1 Reyes, a little east of Cedar Creek in the southwestern part of Bastrop County.

Paton Brothers held up No. 1-B Turner in northern Lee County in one of the most important wildcat deep tests for Edwards lime, pulled in the derrick while working on a fishing job and were further delayed.

The other active deep test for Edwards is Teas & Gant's No. 1 Mikulec in southeastern Bastrop County, down 4,960 feet late last week, the test being scheduled for the Edwards lime or 7,000 feet.

Contracts were expected to be signed late in the week for another test in western Kerr County, where Evans & Gant got a small well in the Pennsylvania and later drilled two dry holes. It is thought that the logs of the three wells furnish enough information to warrant another test and preparations have been going on ever since the last test was abandoned, for drilling another.

In southeastern Kerr County J. E. Anderson took over No. 1 Witt, started by Halbert and later carried to 118 feet by Verde Oil & Gas Co., where it stood for a long time. A big rig is now on the job and it is down 400 feet and drilling.

There has been some reflection onto the American side of the Rio Grande due to the reports of oil showings on the Mexican side opposite McAllen, and it is reported on good authority that a lot of acreage has been leased on the American side in anticipation that the structural conditions continue across the Rio Grande.

Kerr County

J. E. Anderson has taken over Verde Oil & Gas Co.'s No. 1 J. D. Witt in southeastern Kerr County and has started to drill. The well stood for a long time at 118 feet. The plan is for a test that will test out all the possibilities of the Pennsylvanian.

It was expected that contracts would be signed up for another test on the Jeff Love farm in western Kerr County where Evans & Gant drilled three tests and got some good showings of oil in one, enough that on the pump it made a small well. Two tests drilled after that failed to get in the right direction to get the structure and another attempt is to be made.

Laurel Field—Webb County

Magnolia Petroleum Co.'s No. 4 Garcia and Villareal in the Laurel Field looks discouraging. At 2,268 feet it was still dry and is getting too deep. The Dyck or south extension to the field is seemingly narrow. The discovery, Dyck Oil Co.'s No. 1 Garcia and Villareal, 150 feet from north and east lines of the northeast of the northwest of Survey No. 1,-100, was a big well, estimated at around 1,500 bbls. daily or better, and the South Texas Oil Co.'s No. 9 Laurel, north offset to it, was the same size. West offsets to each of these was small, only about 100 bbls. East offsets to each of them were 800-bbl. wells.

The east offset to Dyck's No. 1 was Magnolia Petroleum Co.'s No. 2 Garcia and Villareal, 150 feet from the north and west lines of the northwest of the northeast of Survey No. 1,100. By error this was first carried as Magnolia's No. 1. As a matter of fact No. 1 was drilled some years ago. Magnolia's No. 2 came in for 800 bbls. and the east offset to it is No. 4 which looks dry. The north offset to No. 4 is South Texas Oil Co.'s No. 11 completed last week for 100 bbls.

At the north end of the district Smith & Story and Wolcott & Rehmet's No. 1

(Continued on Page 55)

Wildcat Operations in Southwest Texas

Week Ending March 4

Company, farm and location—	Remarks:
ATASCOSA COUNTY	
Jacob, Buzzini & Pickett's No. 1 Roundtree, 330 ft. from NE and SE lines of W¼ of J. Pointevant Sur. 1.	T.D. 1,265 ft; abd.
Jacob, Buzzini & Pickett's No. 1 Schroeder, 160 ft. from N and W lines of 159-ac. tract in Frederick Anthony Sur.	Location.
Stieren & Pickett's No. 1 Hurt & Tartt, 150 ft. from NE line, 450 ft. from NW line of J. Wilkinson No. 144 Sur.	T.D. 1,250 ft; abd.
BANDERA COUNTY	
Van Winkle's No. 1 R. B. Watson, 600 ft. N of cen. of S line of Sec. 71	T.D. 500 ft; standing.
E. A. Parkford's No. 1 Duke, 200 ft. from S line, 150 ft. from W line of Sec. 7, G.C.&S.F. Sur.	Location.
BASTROP COUNTY	
Champion's No. 1 Rivera, center W½ of 800-ac. tract in Osborne Sur.	T.D. 1,550 ft; S.D.
J. E. Emanuel's No. 1 H. Klemm, 817 ft. from W line, 300 ft. from S line of tract in R. S. Teal Sur.	T.D. 263 ft; S.D.
Humble O. & R. Co.'s No. 1 Beck, 279 ft. from NW line, 330 ft. from NE line of 45.5-ac. tract in Andrew Mayes Sur.	Rigging up.
Humble O. & R. Co.'s No. 1 Betty White, Sur. 2, 2mi. SE from No. 1 Annie Hassler	Location.
Marts & Beavens' No. 1 Roy Rivera, 660 varas from SE lines, 54 varas from NE lines of Mrs. Lucy Rivers' 582-ac. Elizabeth Standifer Sur. 24	T.D. 2,178 ft; abd.
Marts and Beavens' No. 1 Riddle, 162 varas N of S cor., 54 varas from W line of 39-ac. tract in John Maxmillan Sur.	T.D. 2,150 ft; drlg.

(Continued on Page 56)

Activity in Rocky Mountain Area Is Increasing; Resumption of Operations in Osage Field

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Mar. 6.—Drilling operations in the Rocky Mountain area showed a slight increase in activity as a result of improved weather conditions. In New Mexico there were no completions nor new locations in the Hobbs Pool. The Leonard-Barnsdall test in Eddy County gauged 6,742,000 feet of gas in 24 hours and indicates a new high has been located. Two wells in the northwestern area have resumed.

In Colorado two wells were abandoned and one new operation was reported. Manning & Terry's No. 1 Niles, in the Greasewood district, may be deepened to test the Lakota.

In Wyoming, operations are being resumed in the Osage Field in Weston County. One location was reported. Settlement of litigation paves the way for resumption of development on the Pine Mountain Dome northwest of Casper. Ohio Oil Co. will drill another well at Allen's Lake in Carbon County.

In Montana most of the drilling wells are still idle with the exception of operations in the Cut Bank Field, which were mostly routine for the week.

NEW MEXICO

Representatives of a number of operators testified at a hearing of a legislative committee at Santa Fe the past week on a pending measure which provides a severance tax on crude oil production ranging from 2 cents per barrel for oil up to 28 gravity, 4 cents on 28 to 50 gravity and 6 cents on crude above 50 gravity. The opinion was expressed that the proposed law would be unconstitutional since the constitution prohibits an unchanging tax. It is expected a new bill will be drawn and submitted to the operators.

Judge M. A. Otero, in the District Court at Santa Fe, made permanent a temporary writ of mandamus issued two weeks ago requiring the state tax commission to certify to the county assessor of the fifth district (Lea, Eddy and Chaves Counties) the values of oil well supplies, materials and personal property to be placed on the tax rolls. It is estimated that around $2,000,000 worth of property in these counties will be taxed under a law enacted in 1925 as a result of the decision.

Lea County

There were no completions reported in the Hobbs Pools the past week. Amerada Petroleum Corp.'s No. 3 Hardin, NW cor. SW Section 18-18-38, is drilling at 2,050 feet in salt, and Skelly Oil Co.'s No. 1 State, SW SW Section 17-18-38, is drilling at 3,370 feet in anhydrite. Humble Oil & Refining Co.'s No. 1 Hardin, SW cor. NW Section 18-18-38, is drilling at 3,150 feet in anhydrite. The 9⅝-inch was cemented at 2,800 feet with 650 sacks and at 2,900 feet it encountered a flow of 1,500,000 feet of gas. Stanolind Oil & Gas Co.'s No. 26 Byers, C SE NE Section 4-19-38, cemented 8⅝-inch at 3,961 feet with 150 sacks and is drilling out plug, and its No. 8 Capps, C NW SW Section 3-19-38, is drilling at 3,897 feet in lime and anhydrite. Same company's No. 29 State, C SW SE Section 4-19-38, cemented 8⅝-inch at 3,978 feet with 150 sacks and is waiting, and its No. 26 Thorpe, C SE NW Section 10-19-38, is drilling at 3,947 feet in lime and anhydrite. Continental Oil Co.'s No. 1-B State, NE cor. NW Section 25-18-37, cemented 9⅝-inch at 2,767 feet in anhydrite, and The Texas Company's No. 4-C State, NW cor. NE Section 25-18-37, cemented 9⅝-inch at 2,875 feet.

In the Lea area, The Texas Company's No. 1-B Lynch, C SW NW Section 34-20-34, is shut down for orders at 3,808 feet after encountering sulphur water.

In the Jal area, Continental Oil Co.'s No. 12-A Wells, SW NE NW Section 12-25-36, is rigging up.

In the Eunice area Atlantic Oil Producing Co.'s No. 1-B State, C NW SE Section 8-21-36, is drilling at 1,425 feet in salt and anhydrite.

Eddy County

An interesting development took place in Harry Leonard-Barnsdall Oil Corp.'s No. 1 Dodd, SW SE SW Section 22-17-29, in the Jackson area, when gas was encountered at 2,280-90 feet which gauged 6,742,000 feet in 24 hours with a rock pressure of 750 pounds. The location is east of Leonard & Levers' gas wells in Section 21 and about 2 miles west of Grayburg Oil Co.'s No. 2 Keely, completed two years ago as an oil well. There is a possibility of this well disclosing another pool as the flow of gas is about four times as great as in the wells to the west. The 6⅝-inch will be run and the gas bradenheaded off before drilling is resumed.

Finley, Woods & Brainard's No. 5 Brainard, C NW SW Section 5-18-27, southwestern Artesia area, resumed drilling at 1,300 feet and encountered a flow of sulphur water at 1,318 feet. It will go deeper. R. D. Compton's No. 4 Brainard, SE SE Section 5-18-27, is underreaming below 1,300 feet. Flynn, Welch & Yates' No. 65 State, NE SE SE Section 30-18-28, is drilling at 1,875 feet in lime. C. H. Lockhart and others' No. 2 Burch, C SW SW Section 7-17-30, Maljamar area, is rigging up. E. B. Guest and others' No. 1 Pierson & Watson, NE cor. NW Section 8-16-25, Cottonwood district, is rigging up rotary for a sulphur test. R. Spearow and others' No. 1 McClellan, SW NW NE Section 22-22-23, Indian Creek, is bottomed at 1,442 feet in black lime and fishing for 10-inch casing.

San Juan County

Better weather conditions in the San Juan Basin is resulting in some resumption of operations. Gobernador Oil Co.'s No. 1 Likens, SW NE SW Section 12-29-9w, Blanco district, is resuming at 1,250 feet. Fred Barrett's No. 1 Hart, Section 11-29-11, Fulcher Basin, which shut down at 310 feet for lack of fuel, is moving in supply and preparing to resume.

COLORADO

Weld County

Manning & Terry's No. 1 Niles, C SE NE Section 13-6n-61, in the Greasewood Pool, which encountered water in the Dakota sand last fall at a total depth of 6,721 feet, is shut down for orders after plugging back to the Muddy sand, swabbing down and finding no oil. It is possible this well may be deepened to the Lakota to determine the possibilities of that horizon before it is abandoned, but no definite decision has yet been reached. The Lakota has never been tested in the Greasewood Field. No. 1 Niles is between Continental Oil Co.'s No. 1 Briggs, the best producer in the field, and Ohio Oil Co.'s No. 1 Butters, which swabbed 20 bbls. per day initial.

Continental Oil Co. and others' No. 1 Anthes, C NE NE Section 24-8n-59, Buckingham area, 5 miles north of the Ramsey gas well, plugged back from a total depth of 3,905 feet to 3,429 feet to straighten the hole and redrilling is about to begin. Several mishaps have delayed completion and it is doubtful if the results will be known before April 1.

Retter Oil Co.'s No. 1 Cronin, NW cor. SW Section 24-1n-66, in the Brighton-Lupton district, is reported abandoned at 900 feet after having only a show of oil and gas in the top of the Foxhills. This test to the shallow horizon was started after same company's No. 1 Smith found a good show in the sand a year ago. Its No. 2 Cronin, 321 feet southwest of No. 1, is drilling below 742 feet.

Larimer County

Standard Oil Co. of Colorado's No. 1 Wilson, NW cor. SW Section 21-4n-69, Berthoud district, is reported abandoned at 1,250 feet. Drilling on this well was suspended about the time Standard Oil Co. of Indiana filed a suit against the local company to restrain it from using the words "Standard Oil" in its name. Late in 1931 it was reported that Mayer Oil Co. had taken over the lease upon which the well is located.

Adams County

Hills Dome Lease Development's No. 1 Hills, SE cor. Section 27-3s-64, Watkins district, was deepened to 4,150 feet the past week and again shut down temporarily.

Boulder County

An operation not heretofore reported is Consolidated Smelting & Metals Co.'s No. 1 Blubaugh, SE cor. Section 20-3n-70, in the Lyons district. It started in a 12½-inch hole to go around 700 feet and is drilling at 380 feet.

Jackson County

Walden Oil Co.'s No. 1 Mosman, SW SW Section 33-9n-78, South McCallum district, is resuming at 325 (cor.) feet after being shut down on account of cold weather. At this depth it was having considerable trouble with carbon dioxide gas which caused the tools to come out of the hole coated with ice.

Moffat County

William A. Myers' No. 1 State, NW SW SW Section 16-4n-101, Skull Creek, which was shut down for the winter at 3,250 feet, about 2,000 feet below the Tensleep, is expected to resume within a few weeks. It is estimated to be about 300 feet off a sand which shows saturation at the outcrops.

Rio Blanco County

California Co.'s No. 1 California-Raven, NW SE Section 30-2n-102, Rangely Dome, is drilling at 7,143 feet. It is now the second deepest hole in the state and lacks only 167 feet of establishing a new record.

Fremont County

Cherry Creek Placer Co.'s No. 1 Lucas, SW cor. NE Section 32-18-69, Fremont County, is drilling at 1,225 feet in lime.

Delta County

Black Canon Oil & Gas Co.'s No. 2, Lot 12, Section 5-15-94, Delta district, is shut down at 390 feet, and it is undecided whether it will be completed to the gas sand expected at 580 feet. No. 1, only 75 feet away, was completed several years ago as a carbon dioxide gas well. The well was leased to the Quix-Kold Co., which erected a small plant for making dry ice. However, before operations were begun, the casing in the well collapsed and the gas was shut off. After attempts to restore the well failed, it was decided to drill another. Recently it was reported that the trouble has been located and that No. 1 has been gone back into in an effort to restore production.

Park County

South Park Oil Co. reports it has purchased rig, equipment and materials of Mutual Oil Co. used several years ago to drill a test north of Canon City and that the outfit will be trucked to South Park to start a second test to the north of its No. 1 Milligan, NE cor. SE Section 13-8s-76, which is standing at 3,020 feet. The new well has not been spotted, but will be on the Porteous farm, between Jefferson and Kenosha Pass. No. 1 will be completed when casing from the Mutual well arrives.

Larimer County

Richard Branstad and others' No. 1 Branstad, C S half, SE Section 11-11n-69, Round Butte, had the derrick blown down. It will be rebuilt before spring when spudding is expected to begin.

Thomas A. Dines, who has been with the Midwest organization since it was formed and who was president of the Midwest Refining Co. up to last fall when its assets were taken over by the Standard Oil Co. of Indiana and he was elected a vice president of the last-named company, has resigned that office and has been elected president of the Salt Creek Producers Association, Midwest Oil Co. and subsidiaries, to succeed L. L. Aitken, deceased.

WYOMING

Natrona County

Litigation over titles in the Pine Mountain Field 25 miles northwest of Casper, which has held up all development for 10 years, apparently was ended the past week when Judge T. Blake Kennedy, in the Federal District Court at Cheyenne, awarded titles to the White River Lumber Co., of Tacoma, Wash. The interests claimed by Alaska Development Co., Dillard D. Baker, trustee, Pine Dome Products Co. and others were held to be void. Roy Rush, of Casper, who represented the White River Co. and who in June, 1932, was appointed receiver of the properties, is quoted as saying the properties will be put in condition for production. Last year the court awarded the Alaska Development Co. a judgment for $74,000. This company drilled a well several years ago which was reported to have had a showing of light oil, supposedly in the Madison, at 2,824 feet. Clyde Brannon and others drilled two gas wells in 1926 on Section 26-35-84. The wells so far drilled are estimated to be capable of making 30,000,000 feet per day from the Embar-Tensleep. Some oil also was found in some of the wells. It is possible that this operation will be tied in with the Lakota Oil & Gas Co. development at North Casper Creek to supply gas for Casper in the event the city acquires the local distributing system for which negotiations have been pending for some time.

Carbon County

Ohio Oil Co.'s No. 1 Kanawha, SW NW NE Section 34-23-79, Allen's Lake, which was reported a completion last week, gauged 225,000 feet of gas and 225 bbls. of water per day from the Dakota

at a total depth of 1,437 feet. It was tubed and will be saved for fuel and water for another well to be drilled at a location not yet announced.

Weston County

Favorable weather has caused a renewal of activity in the Osage Field. General Oil Co.'s No. 1, NE NW SE Section 22-46-64, is drilling below 500 feet. Riggs Oil Co.'s No. 3, CSL SE NE Section 16-46-64, is a location. Considerable crude is moving out of the field to small skimming plants in the district. Spot crude is selling at 65 cents per barrel. One plant has contracted for a supply at 25 cents premium above Mid-Continent posted price for 40 gravity oil. D. O. Gray, who is operating a skimming plant on his lease in SE Section 13-46-64, is running 300 bbls. per month, but must increase his capacity to take care of a market already established. Joe Dornacher and James Eaton are building a plant on the Wyoming High Test Co.'s lease in SE Section 18-46-63. George Keisling and associates have purchased from the Yellowstone Petroleum Co. two wells in NE NW Section 31-46-64, formerly called the Surety lease, and six wells in SW NE Section 25-46-64, formerly called the Omaha-Allian Co. lease. Both of these properties have been on production for the past 12 years, but will be cleaned out and can be depended upon for a considerable part of the supply for the Britton-Keisling chain of refineries.

Fremont County

The Texas Company's No. 2 State-Ridgway, SE SW SW Section 36-34-95, Alkali Butte, is coring at 5,169 feet, supposedly in the Sundance.

Platte County

T. R. Oberman's No. 1 Diamond, NW SE Section 30-21-68, west of Chugwater, is drilling at 327 feet in hard red sandy lime.

MONTANA

The only activity reported in Montana the past week was in the Cut Bank area in Glacier County. None of the wells in the Dry Creek Field has resumed. In the Cut Bank area, B. E. Adams and others' No. 1 Britton, SE cor. NE Section 14-34-6w, heretofore reported a completion, was shot with 30 quarts at a total depth of 2,892 feet and is cleaning out and swabbing. It swabbed 180 bbls. in four days.

Alberta-Pacific Consolidated Oil Co.'s No. 1 Matson, NE SE NW Section 14-34-6w, which had 1,120 feet of 8¼-inch in the hole at a total depth of 2,770 feet, succeeded in getting hold of the string and connecting it up and lifted it 350 feet when it stuck. It is jarring to loosen. Same company's No. 1 Kiesel, NE cor. NW Section 11-34-6w, is shut down at 2,693 feet waiting for pipe.

Dakota-Montana Oil Co.'s No. 1 Drumheller, SW SE NE Section 3-34-6w, heretofore reported a completion for 25 bbls. at 2,965 feet, was shot with 10 quarts and is cleaning out and swabbing. Shooting helped and it is now estimated at 50 bbls. W. M. Fulton and others' No. 1 Haggerty, NE cor. Section 16-34-6w, spudded on February 2 and is drilling at 125 feet. L. R. Hannah and others' No. 1 Britton, SE SW SE Section 14-34-6w, which pulled in the derrick at a total depth of 2,900 feet, has rebuilt derrick, pulled the 10-inch and is swabbing.

Santa Rita Oil & Gas Co.'s No. 1 Jackson, C NW SW Section 25-34-6w, is drilling at 2,505 feet in the Kootenai, topped at 2,290 feet. The 10-inch was set at 2,296 feet. Same company's No. 1 Tribal, C SW NE Section 15-35-6w, is drilling at 425 feet. It had a water sand at 285 feet and water rose 135 feet in the hole. R. C. Tarrant's No. 1 McLellan, SE SW SW Section 7-34-5w, is drilling at 2,650 feet.

Liberty County

J. W. Dohn and others' No. 1 Miller, C NE NW Section 15-37-51e, Flat Coulee, is idle after skidding rig from hole lost at 295 feet. Mr. Dohn contracted influenza while at the well last fall and died the past week at Hinning, Minn.

Keho Lake Test May be Followed by Second; Turner Valley Gas Report to the Legislature

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Mar. 4. — Official returns by the Department of Lands and Mines at Edmonton show that crude petroleum production from all Alberta fields for January amounted to 70,356 bbls. compared with 69,181 bbls. in December. Turner Valley naphtha amounted to 65,585 bbls. against 64,344 bbls. in December. Turner Valley light crude, however, dropped from 1,270 to 1,183 bbls., and Red Coulee light crude from 3,021 to 2,938 bbls. Wainwright heavy crude was up slightly, from 546 bbls. in December to 650 bbls.

Keho Lake Test

On Keho Lake structure, northwest of Lethbridge, Hudson's Bay Oil & Gas Co.'s No. 1 Keho, LSD 2, Section 17-11-22w4, has completed an exhaustive series of pumping tests following shooting of a stray oil sand encountered in the Benton shale at 3,770 feet. The well was pumped for a few days, then cleaned out and bailed, making a maximum production of 6 bbls. a day, this, it is understood, including the production from both the main horizon at 3,770 feet and from an upper sand at around 3,680 feet. The main sand in the Benton shale was about 4 feet thick and carried asphaltic oil testing around 32 gravity with 70 per cent gasoline. The quality of the crude was very satisfactory but the production proved disappointing, the earlier shows when the sand was first struck having indicated possibilities of a good commercial well.

Before making test of the Benton horizons the well had been drilled into the top of the Madison lime. It got the lime around 4,914 feet, but owing to fishing trouble had to cement back and redrill. An oil and gas horizon was met at 4,917 feet, just below the Ellis-Madison contact. At 4,942 feet salt water was struck when the hole was plugged back to 4,926 feet, but failed to develop anything approaching commercial production in the Madison. The test of the upper sands followed.

The well has been shut down pending instructions from the Continental Oil Co. of which Hudson's Bay Oil & Gas Co. is a subsidiary. In the meantime geological work will be undertaken on the structure with a possibility of a second test being drilled later. There is a chance the sand may thicken on the flank of the structure sufficiently to give a commercial well on another location.

Twin River Test

On Twin River structure southeast of Lethbridge. Nordon-Roney's No. 2 Twin River, LSD 11, Section 2-2-20w4, has resumed drilling and is making new hole below 550 feet, with casing set at 261 feet.

Milk River Operations

On Milk River structure, Commonwealth Petroleums' No. 1, LSD 8, Section 9-3-15w4, is reported resuming at 5,240 feet. The potential oil horizon is expected around 5,500 feet.

Cut Bank Field

On the Montana side, higher temperatures has permitted a resumption of drilling operations. Adams-Mannix's No. 1 Britton, SE SE NE Section 14-34-6w, is at 2,890 feet with about 2,000 feet of oil in the hole and will be a fair producer. Dakota-Montana Oil Co.'s No. 1 Drumheller, Lot 2, Section 3-34-6w, has deepened from 2,945 to 2,952 feet, increasing its swabbing production from 40 to about 60 bbls.

Alberta Pacific Consolidated Oils' No. 1 Kiesel, Section 11-34-6w, is at 2,693 feet and running casing. Alberta Pacific's No. 1 Matson, SE NW Section 14-34-6w, is at 2,760 feet and pulling damaged casing. The crew was trying to pull a string of tools with the 8-inch casing and casing bowl when the shaft on the crown block broke and the string dropped some 60 feet, the casing collapsing. L. R. Hannah's No. 1 Britton, SW SE Section 14-34-6w, has pulled the collapsed casing and is running new string. The hole stands at 2,897 feet and before the recent shutdown swabbed 195 bbls. in 16 hours. Roy Tarrant's No. 1 Haglund, Sr., SW SW NW Section 13-34-6w, is standing at 2,846 feet waiting for a shot, and Tarrant's No. 1 McClellan, SE SW Section 7-34-6w, is drilling below 2,400 feet. Tarrant's No. 1 Britton, NE NE SE Section 14-34-6w, is cleaning out and swabbing close to 50 bbls. a day. Two other tests are drilling, one spudding, one rigged up and two starting. The latter are the Fulton and Santa Rita tests on the Blackfeet Indian Reserve. Commonwealth Petroleums, Ltd., of Calgary is reported associated with the Fulton interests in the reserve test which is located in Section 16-34-6w, and is expected to get the Cut Bank sand at a point about 200 feet deeper than some of the earlier wells.

South Turner Valley

In South Turner Valley area, Mar-Jon-Freehold's No. 1, LSD 9, Section 28-18-2w5, is drilling in the lime below 5,728 feet with occasional small bands of hard formation. The test is 325 feet in the lime with a fair gas production from the top of the Madison. It offsets Merland Oil Co.'s No. 1 in Section 27-18-2w5, which got its main production 425 feet in the lime.

Associated Royalties' No. 1, LSD 9, Section 5-19-2w5, is drilling in hard formation below 3,340 feet.

In the far south, Hoffar-Lundy Syndicate's No. 1, LSD 13, Section 22-18-2w5, is starting to rig up equipment moved from the Anglo-Pacific location in Waite Valley.

New Test Likely

Negotiations are in progress for drilling a new south Turner Valley test on holdings of Ray R. Knight & Co. of Vancouver in Section 28-18-2w5. The test is to be drilled by Mid-Royal Oils, Ltd., of Calgary and the tentative proposition will be submitted to shareholders of the company March 8. Acreage is in LSD's 11, 12 and 13, west of Merland's No. 1 producer and a little north of Mar-Jon-Freehold's No. 1. Mid-Royal's No. 1 was started some years ago in LSD 4, Section 31-19-2w5, in the Central Turner Valley, and has been standing at 2,140 feet.

North Turner Valley

In the North Turner Valley area, Model Oils' No. 2, LSD 16, Section 22-20-3w5, is drilling below 4,900 feet and making rapid headway. The test should get the producing horizon a little below 5,900 feet.

Turner Valley Report

The report of the Turner Valley Gas Conservation Board on its investigations into the Turner Valley gas situation has been practically completed and will be submitted to the Alberta provincial government early in March. It will be transmitted by the government to the legislature, which is now in session. F. M. Brewster, technical advisor to the board, will likely appear before the committee. No. information has been made public as to the contents of the report, but, in addition to details of the results secured by the various tests, it is expected to embody some recommendations as to a permanent policy in operating the field.

Monarch Structure

On the Monarch structure west of Olds, Cartier-Majestic's No. 1, LSD 3, Section 36-31-7w5, is reported resuming at 1,460 feet after cementing in order to sidetrack a lost bit.

In the forest reserve area, farther west, Hunter Valley Oil Co.'s No. 1, Township 31-10-5w, is reported hauling boiler and heavy equipment, though work has been delayed by an exceptionally heavy snowfall in the foothills. Derrick is being erected at the well site.

On Moose Dome, Gerron Cartage Co.'s Moose Oils No. 1, LSD 16, Section 29-22-6w5, is cleaning out around 2,820 feet.

Red Coulee Field

In the Alberta end of the international Red Coulee Field, Devonshire Oils' No. 1, LSD 3, Section 10-1-16w4, is drilling out cement after setting 8-inch casing at 2,065 feet. It is the only test actively drilling in the Red Coulee Field.

Sweetgrass Hills Producer

Interest has been revived in the Reserve Dome structure and other potential oil areas north of the international boundary by the reported completion in the Sweetgrass Hills area of Montana of Wild and associates' test with a flow of between 10 and 12 bbls. of high-grade crude. It is understood the test may be deepened to the Kootenay formation. A little north and west, on the Alberta side of the boundary, Mayland Southern's No. 1, LSD 13, Section 4-1-9w4, over a year ago got strong gas shows in several horizons but was deepened to 3,000 feet without securing oil production. A number of the Montana structures in the Sweetgrass Hills area extend north into Alberta, though the formations appear to dip considerably on the Alberta side.

Kevin-Sunburst Test

A number of Lethbridge men are interested in a new test by S. V. Day of the Day Oil Co. on an 8-acre tract in the heart of the Kevin-Sunburst Field. Location has been made in E half NE Section 17-35-2w, and equipment is on the lease. The test is to spud in about April 1 and completion is expected by May, with production looked for around 1,630 feet. The new venture will have no connection with the Day Oil Co., but Mr. Day will have personal charge of the drilling.

Athabaska Test

In the Athabaska district, northern Alberta, Athadome Oils' No. 2, LSD 3, Section 15-66-23w4, is reported drilling close to 1,200 feet. Considerable gas has been encountered in the shale, and traces of oil have been brought up. The drill is working in alternate bands of sand and shale, and no important results are expected till a depth of about 1,350 feet is reached.

Turner Valley Report

Pending submission to the Alberta legislature, details of the report of the Turner Valley Gas Conservation Board have been made public. The report removes all restrictions in the Turner Valley Field, including the restriction on the drilling of new tests into the producing horizons of the Madison limestone.

Restriction of the gas output to 200,000,000 feet a day is, however, continued. Of this quota, Imperial Oil subsidiaries and contract companies are allotted 108,200,000 feet a day, while independent companies are allotted 45,439,000 feet.

(Continued on Page 55)

Half Dozen Completions in Central Ohio Field; Indiana One; Kentucky and Illinois None

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Mar. 6.—Very few completions were made in any of the divisions of the Central West Field, comprised of the Lima Field, Central Ohio, Indiana, Illinois and Kentucky. In the Lima Field a number of old producing wells were abandoned. In Wood County the Ohio Oil Co. abandoned No. 12 on the J. E. Parmenter farm, Section 2, Liberty Township, and No. 29 on the S. L. Mitchell farm, Section 35, same township. In Henry Township, same county, the Ohio Oil abandoned No. 9, on the B. A. Lawrence farm, Section 23; No. 36 on the B. A. Lawrence "E" farm, Section 23; No. 13 on the S. M. Bowers farm, Section 34, and Nos. 2 and 5 on the John Lawrence farm, same section. Mary V. Conzen is drilling on the C. E. Mercer farm, Section 14, Liberty Township, same county.

In Spencer Township, Allen County, the Ohio Oil Co. abandoned No. 2 W. T. McCracken farm, Section 24, and Nos. 2, 10 and 11 on the Mat Suever farm, Section 13, same township.

In Auglaize County, W. B. Jack abandoned No. 1 F. Zeigenbush farm, Section 10, Logan Township, also Nos. 1, 2 and 3 on the P. A. Ramga farm, same section. C. Wintzer is drilling on his own farm, in Section 28, Douchouquet Township, same county.

Green and others are shut down at 1,607 feet on the Mary McElhaney farm, Section 15, Hopewell Township, Seneca County, which looks as though it would be a failure, unless a deeper pay is found in the Trenton lime formation.

In Ballville Township of Sandusky County, T. F. O'Brien and others' test on the Cynthia J. Rice farm, Section 17, is shut down in the Trenton at a total depth of 1,568 feet and does not look very favorable.

Newcomer and others are shut down at 1,913 feet on the Albert Reber farm, Section 1, Pitt Township, Wyandot County.

E. J. Davis and others are reported drilling around 800 feet on the Charles B. Holloway farm, Section 7, Monclove Township, Lucas County.

CENTRAL OHIO

Half a dozen wells were reported from the Central Ohio Field, three being producers with an initial of 91 bbls., two dry holes and one gas well. The best completion was Murphy and others' No. 2 on the Ward Little farm, Section 17, Perry Township, Coshocton County, which produced an initial of 75 bbls. from 3,004-54 feet. Wiser Oil Co. is drilling No. 1 on the Abraham C. Crowthers farm, Section 18, same township. City Natural Gas Works drilled in No. 3 on the N. C. Hummel farm, Section 35, Berne Township, same county, for a gas well.

In Knox County H. E. Perkins and others report a dry hole on the Ross Hunter farm, Section 24, Union Township, at 2,675 feet.

In Medina County, Curtis & Eaken drilled in No. 7 on the Thomas Brown farm, Lot 22, Chatham Township, which was a dry hole. Same company's No. 7 on the Harriett Broadsword farm, Lot 21, produced 15 bbls. initial at from 335 to 378 feet, which is the Berea sand. Edson and others' No. 1 on the William Wertz farm, Lot 5, same township, is reported good for 1 bbl. from the Berea sand from 315 to 375 feet.

In Summitt County the East Ohio Gas Co. is No. 2 on the Everette Bexler farm, Section 17, Greene Township.

In Richland County, Spohn & Nachman are drilling on the D. C. Stewart farm, Section 18, Weller Township.

In Muskingum County, Washington Township, Robert Straker has abandoned his test on the Grover Wilson farm. Wittmer Oil & Gas Co. is drilling into the Niagara lime, which was topped at 2,600 feet on the James E. Miller farm, and had reached a total depth of 3,510 feet.

In Stark County, Kime and others have a rig in for No. 4 on the Charles A. Oberlin farm, Section 6, Jackson Township. Brendel Producing Co. is drilling on the W. H. Deuble farm, Section 17, Plain Township, same county. No completions were reported in Stark County, which is something out of the ordinary.

In Belmont County the Ohio Fuel Gas Co. reports a dry hole in No. 1-5,700 on the Sylvester Daugherty farm, in Sections 22-27-28, Warren Township, at a total depth of 1,838 feet.

In Guernsey County, Westland Township, C. C. Wharton and others are drilling No. 4 on the A. Kerr farm, Section 10.

King & Tanner have a rig in for No. 2 on the Charles McLaughlin farm, Section 36, Somerset Township, Belmont County.

INDIANA

Only one completion was reported from Indiana, a 15-bbl. initial producer drilled by Jess Young in No. 2 on the Kruger farm, Section 33, Center Township, Vanderburg County, in the extreme southwestern part of the state. In the same township, John L. Drake and others are drilling No.'s 3 and 4 on the John and Mary Effinger farm, NW Section 33, same township. Ellis & Young are drilling No. 1 on the Evansport Airport, in the same section, and the Maxwell Petroleum Corp. is drilling No. 1 on the Young farm, and No. 3 on the George Hornby farm, also in the SW Section 33, same township. In Scott Township, same county, C. J. Weideman is drilling on the W. W. Sipp farm, SW Section 19, Scott Township, same county.

No completions were reported from the Illinois fields.

KENTUCKY

No completions were reported in the Kentucky Field. The only report was the starting of a well in advance of production by the Three Sands Oil Co., on the J. P. Orick farm, in the Owensboro Field, in Daviess County.

Two wells westward from the West Kentucky Field are drilling, D. L. Johnson and others' No. 2 on the Brandenberg Mining Co.'s property, near Heidelberg, in Lee County, and Reed Hughes and others' No. 2 on the Owen farm, on Trace Branch Creek in the Barboursville Field of Knox County.

Seven Completions in East and Two Dry Holes; Best Producer Is in Medina County, Ohio

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Mar. 6.—Closely following the announcement covering the lower field curtailment, pipe lines and purchasers of crude run in the upper fields, Bradford, Pa., and Allegany, N. Y., ordered the allowable as set for February continued throughout March, or 75 per cent of the base. Thus in only one district, that of the Macksburg division in Southeast Ohio of the Buckeye Pipe Line Co., was the allowable increased and that only 5 per cent. This increase might total 10,000 bbls. for this month. In view of the length of the present curtailment, which began January, 1932, many operators hold the opinion that it would be a difficult matter to return the lower eastern fields to 100 per cent without a considerable effort and some outlay. In some cases operators find it unnecessary to reduce the number of pumping hours per week to stay within the allowable. This contention is substantiated by the decreasing pipe line runs caused not alone by the curtailment but the continually diminishing number of producers completed.

Completions in all sections of the lower eastern fields totaled seven and two dry holes. Five were gas wells and two producers with an initial production of 35 bbls.

SOUTHEAST OHIO

The best producer was in Southeast Ohio, in the shallow sands of Medina County, the first in that district for a period of weeks. In Chatham Township, Tract 16, Lot 21, W. H. Geddes completed No. 7 on the Harriet Broadsword farm in the Berea grit at a depth of 380 feet. It produced 25 bbls. the first day after shot.

In Knox County H. E. Perkins and the Upham Gas Co. drilled a test on the Ross Hunter farm, Section 21, Union Township. It went through the Clinton sand to 2,885 feet and after shot and standing six days made but 2 bbls. of oil. It was plugged and casing is being pulled.

In the shallow sand district of Licking County, G. F. Earley and others drilled a test on the David P. Hall farm in Lot 3, Newton Township. It will make a small gas well, probably 50,000 feet a day, from the Berea sand.

The deep test of Benedum & Trees on the E. E. Knowlton farm in Section 10, Independence Township, Washington County, made progress during the week. The depth now is 7,225 feet and drilling in a lime formation which is more easily penetrable but, on account of the depth of the cable, drilling progress is necessarily slow. The Clinton sand has not yet been struck though it had been estimated to be at about 7,150 feet but may have a greater angle of dip as there is little with which to correlate.

In other sections of Southeast Ohio, drilling is very scare as is usual at this season of the year. In Belmont County some additional work is being done but as yet without completion. Drilling in the deeper sands at present is limited to three wells.

WEST VIRGINIA

One producer was completed in West Virginia and amounted to a fair test. In Ritchie County, about 250 feet north of Lost Run in Clay district, Roscoe Richards and others completed a test on the Edgar Hinton farm in the Big Injun sand. After shot it is estimated good for about 10 bbls. a day initial. In DeKalb district, Gilmer County, the test of Poling and McDonald on the Miles Snyder farm was drilled through the Injun sand to 1,885 feet. It proved to be a dry hole. This probably ends the drilling in that section for what had been expected to be a small pool or extension following the completion of the Engle heirs test failed to materialize on contigous leases.

Another fair test was completed in the pool in Guyandotte district, Cabell County. It was the test of Swanson and Hatchard on the F. M. McCoach & Co. property and was drilled in the Brown shale at a depth of 2,951 feet. After shot, it was gauged for in excess of 500,000 feet a day.

In Calhoun County another fair gasser was completed. In Sheridan district Haught and Osborne and others drilled a second test on the Alva Elder farm in the Injun sand about 2,100 feet. It is showing for about 650,000 feet of gas a day.

In Lincoln County the B.C.K. Gas Co. completed a test on the M. H. Johnson farm in Sheridan district. It is showing for a small gas well at a depth of 2,083 feet.

In Monongalia County the Kane Gas & Plumbing Co. completed its test on the Thomas J. Johnson farm in Grant district at 1,858 feet in the Injun sand. It will make a small gas well.

In Marion County the Clifton Oil Co. drilled its test on the H. Campbell heirs farm in Mannington district deeper from the 3,412 feet of last week to 3,535 feet and completed it as a gas well.

Drilling in West Virginia

In Ritchie County a new operation drilling is the test of Doctor Moyers and others on the Newton Law farm in Grant district. In this district, J. G. Charters has a rig standing on the A. F. Daubenspeck farm. J. W. Roberts is in the sand in his No. 3 on the H. B. Perrine farm. In the same district, Herbert Flanagan and others are down 1,100 feet on the Lucy Jenkins farm. In Clay district, the second test of the Lucky Strike Oil Co. on the L. E. Robinson farm has reached 1,912 feet. In Grant district, Russell Morris and others are drilling at 1,300 feet on the J. E. Hardbarger farm.

In Wirt County M. H. Burke has a rig standing on the J. L. Showalter farm in Clay district. In this district the Rock Run Oil Co. is fishing for the tools on

the J. E. Leep farm at a depth of 1,800 feet. In Tyler County Haymond and McCullough are down 1,040 feet in No. 5 on the D. D. McCullough farm in Centerville district.

In Roane County a new test is starting. D. S. Fisher and others have made a location for No. 1 on the Stella V. Knotts farm in Spencer district. In Geary district the Tawney Oil & Gas Co. has reached 1,750 feet on the D. L. Tawney farm. The Big Sandy Oil & Gas Co. remains shut down at 1,545 feet in its second test on the T. F. Smith farm.

In Calhoun County Norris and Cain are spudding in on the John T. Miller farm in Washington district. In Lee district, F. F. McIntosh is building a rig on the John and Charles Davis farm. In Center district, W. H. Bickel is down 700 feet in a second test on the George D. Starkey farm. In Sherman district, H. B. Scott has reached 1,325 feet on the Board of Education lot. C. A. Jarvis is rigging up on the Ida M. Whipkey farm. In Sheridan district, L. B. Carroll is down 400 feet on the Pell Shank farm, and W. T. and O. L. Yoke are drilling at 1,725 feet on the A. T. Yoke farm.

In Jackson County, H. H. Sheppard and others have reached 1,445 feet on the T. C. Burdette farm in Washington district. In Gilmer County, A. E. Ellis and others are rigging up on the L. H. Lydick farm in DeKalb district.

In Wayne County the test of the Burgess Oil & Gas Co. is nearing the shale on the Robert Vaughn farm in Union district, the depth being 2,670 feet. In Lincoln County, Pridemore and Adkins are at 1,350 feet on the Lonnie C. Egnor farm in Jefferson district. In Duval district, the Cambridge Gas Co. is drilling at 2,300 feet in its second test on the Charles Harless farm.

The test of the Shimwell Oil & Gas Co. has been completed at 3,125 feet on the W. J. Price farm in Grant district and is rated good for 5 bbls. a day.

SOUTHWEST PENNSYLVANIA

Southwest Pennsylvania again failed to record any completions. Only five wells are drilling and of these three are in Amwell Township, Washington County. There the Union Gasoline and Oil Co. has run the 5-inch casing and is at the bottom of the Fourth sand on the Paul Lewis heirs farm. Completions should be made this week. Approaching the same depth, the Carnegie Natural Gas Co. is making excellent progress on the C. L. Morton farm. The Wise Oil & Gas Co. is running 10-inch through the Pittsburgh Coal on the John Roach farm. Raymond Orrill and others are hauling materials for a rig but are waiting on the Lewis completion before making a location.

In South Franklin Township, Baldwin and Gaskell have resumed drilling in their test on the R. J. Clark farm. In this township, the test of the Union Gasoline & Oil Co. on the A. N. Hathaway farm is unreported.

Wildcats

The only progress made in Virginia was in the Benedum & Trees test on the Clinchfield Coal Co. tract in Russell County. The depth now has reached about 5,600 feet and the test is shut down for rig repairs. In Washington County, Brehn & Co. are running casing to a depth of 2,700 feet on the J. M. Arnold farm. The Benedum & Trees test on the I. Kaufman farm is down for orders. Difficulty has been found in straightening the hole.

E. M. TREAT DIES

BUFFALO, N. Y., Mar. 6.—Ellis Milo Treat, 60, oil operator with large holdings in Pennsylvania and midwest fields, died here last week.

As a young man he was instrumental in forming the Casey Pool, a big oil venture in Illinois, and later joined with his father, Milo Clinton Treat, and an uncle, George W. Crawford, in formation of the Ohio Fuel Supply Co., which later was merged into the Columbia Gas & Electric Co. He moved to Buffalo 20 years ago.

Sixty Tests to Start in Michigan Fields; Otway Test Is Indicating New Pool

By GEORGE A. WHITNEY

MOUNT PLEASANT, Mich., Mar. 6. There is no letup in development work in the Central Michigan Field, and while the wells are not as prolific, drilling goes steadily along. The best completion in the Central Michigan Field was made by the Theodore Oil Co. in a test 330 feet from the north line and 990 feet from the west line of the A. Kane farm, NE NW SE Section 3, Chippewa Township, Isabella County, with 100 bbls. initial.

The Jones-Woodruff No. 3, 990 feet from the south and east lines of the Jones-Woodruff farm, NW SE NW Section 13, Greendale Township, Midland County, is reported for 10 bbls.

Strange Oil & Gas Co.'s test, 300 feet from the south line and 990 feet from the west line of the J. L. Littlefield farm, SE SW SW Section 9, Surray Township, Clare County, was abandoned as a dry hole at a total depth of 4,156 feet. It made 30,000 feet of gas from the Dundee formation. The gas is said to correspond to that of the dry gas pools now developed and did not appear to be casinghead gas from the oil formation. Deeper drilling on the Clare well after the gas had been tapped at 4,120 feet brought water at 4,125 feet and no oil show was reported. The well checked from 50 to 75 feet lower on the Dundee than other wells and it was held that the low formation may have accounted for the fact that the well did not produce greater quantities of gas. The gas show, however, it is believed, did indicate that commercial wells might be located if drilled higher on structure in that district.

Possible New Pool

The well drilled by the Michigan Pacific Oil & Gas Co., 990 feet from the north line and 330 feet from the east line of the Joseph H. Otway, Jr., farm, SE NE SW Section 22, Porter Township, Midland County, approximately 10 miles southeast of the prolific Greendale Pool, is the largest producer found in Michigan for a long time, and after being treated, is reported to have produced 3,200 bbls. in 36 hours which if true is a remarkable find being so far away from the rich East Pool. The well flowed into two 1,000-bbl. tanks, along with a surface container holding 1,500 bbls. The location of the Otway well is considered an "in and outer" as one well on the plat delivered a small flow and another proved to be a duster. Despite this fact the Otway appears to be in a prolific pool and plans are being made for further drilling in the immediate vicinity.

Confirming reports that the Pure Oil Co. would start 60 new tests in the near future to protect its leases and bolster the waning aggregate production of crude in the Central Michigan area are nearly a dozen late applications for new drilling projects. Emphasis is being placed on exploration south and southwest of the East Pool, where hope for an extensive new producing area has been stimulated by the Yost and Otway well tests in southern Greendale and Porter Townships.

Field Pickups

Two completions are reported from the Saginaw Field. Smith Petroleum Co.'s test on the Richard Johns farm, W half SW Section 21, Birch Run Township, Saginaw County, is reported showing for 5 bbls. from the Berea sand at a depth of 1,545 feet, and the same company's test, 300 feet from the north line and 900 feet from the east line of the John Poellet farm, N half E half SW Section 29, same township, was reported dry at 2,500 feet.

Flannigan & Vorhies failed to find a pay in the Traverse formation in a test 990 feet from the north line and 330 feet from the west line of the B. F. Woodruff farm, SW NW SE Section 18, Newfield Township, Oceana County, and may be sent to the Dundee formation. Indications point to drilling activity in the northern part of Muskegon, north of the old Muskegon Field.

The Pure Oil Co. secured a drilling permit for a test 990 feet from the south line and 330 feet from the east line of the George Veitengruber farm, E half SE Section 27, Vasser Township, Tuscolo County, and near the town of Vasser, almost due east from Saginaw and southeast of Bay City; also to drill No. 7, 1,650 feet from the south line and 990 feet from the west line of the Emma O. Reed farm, N half SW Section 11, Greendale Township, Midland County.

R. D. Malcolm is starting a very important test for gas in the southwest corner of the Herman Cook farm, S half NE Section 2, Broomfield Township, Isabella County, and approximately 2 miles east of the present known limits of the Broomfield gas pool.

More activity is shown in drilling operations in the Vernon Field of Isabella County than for months. Mammoth Petroleum Corp. has made a location on the Marseillers farm, NW NW SE Section 23, Vernon Township. Mellon-Pollock Oil Co. is starting No. 1, 990 feet from the north line and 330 feet from the east line of the Mrs. David Crowley farm, SE NE NE, same township. Lawson Oil & Gas Co. is starting a test in the southwest corner of the Arlinda and Arville Thayer farm, SW SW NW Section 23, same township.

The Pure Oil Co. is starting six new wells in Greendale Township, Midland County: No. 2 McCann, SW SE NE Section 7; No. 2-A, Joe Nowak farm, NW NE SE Section 7; No. 1 Harry Bond farm, NW NW NW Section 14; No. 4 Edward Harris farm, NW NE SW Section 15; No. 7 Charles D. Mullett & Co. farm, NE NE NE Section 15, and No. 6 Emma O. Reed farm, SW NE SW Section 11.

L. G. Thompson has spudded in his wildcat in the southwest corner of the William A. Ryal farm, SW SW SW Section 3, Mount Haley Township, Midland County, one-half mile southeast of the Sims farm well.

Canada

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The remainder is the allotment or reservation for the owners of nonproducing acreage.

Royalite Oil Co., the major producing organization among Imperial subsidiaries, is allotted 48,881,000 feet a day. Mercury Oils, Ltd., the leading independent producer, is allotted 14,174,000 feet, this being the second largest quota.

The report, after its submission to the Alberta legislature, is to be dealt with by a committee of the whole house.

Saskatchewan Operations

In western Saskatchewan the Golden Ridge Oil & Gas Co. is preparing for commercial development in the Unity Valley area, near Vera, following the striking of shallow gas production in a structure test. This company is taking over the development of acreage previously by Unity Valley Oil Co. of Calgary.

Unity Valley's No. 1, SE Section 23-41-24w3, a couple of years ago encountered a strong gas flow and traces of oil. It was carried to 3,000 feet and is cased to the bottom. The gas flow is understood to have been struck a little below 1,400 feet, the drilling being carried deeper for oil. Unity Valley's No. 2, same section, was carried to nearly the same depth, while No. 3 in Section 14-41-24w3 discontinued work around 2,000 feet.

Golden Ridge Oil & Gas Co., of which R. H. Breckon of Calgary is president, has done some structure testing in the area. The area under lease is part of the plains area and related to the structure or group of structures which have produced the Medicine Hat and Bow Island Fields in southeastern Alberta, the Wainwright and Fabyan Fields in east-central Alberta and the Ribstone Field in Alberta and Saskatchewan. The Unity Valley leases are on the northeastern end of the potential producing area. So far as the Alberta tests have gone, some large gas fields have been proven, while a small oil production has been developed in the Wainwright and Ribstone Fields.

The structure test on the Gathys farm shows that the formation rises in that direction, and has a westerly trend. The Golden Ridge Co. has decided to give Unity Valley's No. 1 a definite production test with a view to recovering the large gas production reported when first drilled. It is possible some small oil shows encountered in the original drilling will also be tested.

Ontario Drilling

In Lambton County, Ontario, Union Gas Co.'s No. 66, Lot 22, Concession 6, Sombra Township, is drilling below 700 feet. This will test a potential southwesterly extension of the Dawn Field. In the west end the three Union oil producers completed last year are maintaining a steady production of high-grade crude, between five and six carloads of crude being shipped in a month.

In the Tilbury Field, Kent County, Glenwood Syndicate's No. 1, S half Lot 10, Concession 13, Tilbury East Township, is reported drilling around 600 feet, on a test of the Tilbury sand.

Farther east, in Orford Township, Vacuum Gas & Oil Co.'s No. 5, Lot 53, South Talbot Road, is drilling around 1,200 feet. Vacuum's No. 4, north of the Talbot Road on the same lot, got its gas showings around 1,580 feet.

Southwest Texas Fields

(Continued from Page 51)

Lloyd at 2,850 feet is shut down for water 600 feet deeper than any production in the field and the log showing considerably different. It is to be carried to around 3,500 feet.

Tuleta Field—Bee County

The Texas Company's No. 2 Cox in the Tuleta Field in Bee County in the upper or Pettus sand at 4,076-79 feet tested 400 pounds gas. At 4,076-4,113 feet it tested 625 pounds and with the tester set at 4,114-29 feet it tested a little oil. It passed up the upper sand and early this week should have been in the Yegua.

Starr County

Due to the slump in the price of oil, operations in the Los Olmos Pool in Starr County have come nearly to a standstill and a number of locations heretofore carried in the detailed report from Southwest Texas have been dropped until conditions improve since they will not be drilled unless there is a change.

Kansas Fields

(Continued from Page 45)

rig. Mabee, Inc., and others' No. 4 Martens, CEL SE NE SE Section 19-22-3w, is a rig. Phillips Petroleum Co.'s No. 3 Warkentine, SW cor. Section 20-22-3w, is a rig.

McPherson County

Whan and others' No. 1 Dixon, NW cor. SW Section 7-19-2w, an old well drilling deeper, was drilling at 3,044 feet. Olson Drilling Co. and others' No. 2 Koehn, NE cor. SW SE Section 36-19-2w, made 85 bbls. from 3,396-3,404 feet. Prunty Drilling Co. and others' No. 1 Kasey, SE cor. NW NW Section 35-19-3w, made 125 bbls. from 3,090-98 feet. Mabee, Inc., and others' No. 5 Klassen, NE cor. SE, Section 33-21-3w, made 2,276 bbls. from 3,466-78 feet.

Sumner County

Deal and others' No. 1 Kelly, NW cor. SW Section 2-33-2, is a rig.

Two Big Gassers on Smethport Anticline 20 Miles Apart, Open New Field

By SPECIAL CORRESPONDENT

BRADFORD, Pa., Mar. 4.—Two new gas fields were discovered in the Oriskany sand on the Smethport anticline during the early part of this week with the successful completion of two producing wells.

A new gas field was opened on a structure near Eleven Mile Corners, Oswayo Township, Potter County, Pennsylvania, with the drilling in of an 11,000,000-foot gas well on the J. Moran property by the Cunningham Natural Gas Corp. of Bradford. Sand was topped at 4,897 feet.

This well is on a defined high along the state line about 6 miles west of Genesee. Judging from the size of the well, the closed-in pressure of 2,100 pounds, and the structural conditions, all indications point to the development of a large producing area.

The original geological work on this area was done by Torrey, Fralich & Simmons of this city.

On Wednesday, March 1, the Witmer interests of Pittsburgh drilled in No. 1 Weber on Rock Creek, about 2½ miles northwest of Greenwood, Steuben County, New York This well gauged 12 800,000 feet open flow and 1,900 pounds rock pressure from sand at 4,256 feet, drilled 1 foot in.

A well drilled last year about three-fourths of a mile northwest of the present well produced about 1,500 000 feet of gas and a large volume of salt water and appeared to be just at the salt water contact on the edge of the gas field. The new well definitely established the second new Oriskany gas field in the New York-Pennsylvania district.

The geological work in the Oswayo and Greenwood areas was done by Torrey, Fralich & Simmons of this city. The actual field work was handled by Mr. Fralich, who also has to his credit the locating of the Tyrone gas field in Schuyler County, New York, for the Belmont Quadrangle Drilling Corp.

In the opinion of operators acquainted with the geology of this section and the location of certain salt water wells, the development of two such large gas wells, some 20 miles apart and along the same axis, marks the opening of a most important and extensive Oriskany gas-producing area.

The Mutual Natural Gas Co.'s No. 2 Murray, in Tioga County, was good for 3,360.000 feet of gas at a depth of 3,787 feet. Potter Development Co.'s No. 1 W. H. Allen was dry and abandoned at 6,368 feet. J. B. Reed's No. 1 Champlin, in Potter County, was abandoned.

Five Bills to Strengthen Proration in East Texas

AUSTIN, Tex., Mar. 6.—Five bills to bring the proration laws under the penal statutes have been introduced in the legislature. Col. Ernest O. Thompson, member of the Texas Railroad Commission, had the bill drawn up at the request of members who had asked him what he would do to put teeth into proration laws and make their enforcement feasible.

The five bills propose:

1. Persons required to make reports to or keep records for the railroad commission who make false reports, or who fail to report, would be guilty of a felony and subject to one to five years imprisonment.

2. Making it a penal offense to break a seal placed by the commission on any well, pipe line, loading rack, storage tank, or refinery, the penalty being a fine of $25 to $100 and 30 days to six months in jail.

3. Making it a felony to produce in excess of the commission's allowable; to deliver oil that has not been measured and recorded by gauge or meter; or to run oil through a by-pass. Penalty, one to five years.

4. Allowing natural gas to escape into the air would be punished by a fine of from $25 to $100 and 30 days to six months in jail.

5. The filing of a suit by the railroad commission against any operator would establish a lien on the operator's property, which lien would be operative against any person to whom the property might be transferred. Colonel Thompson explained that many now escape punishment under civil statutes by transferring their property so that the State can take nothing if it should obtain a judgment.

NO CONFERENCE WITH RUSSIA

NEW YORK, Mar. 6.—A conference with the representatives of the Russian oil industry is not considered likely in the near future. The outcome of the present conference with the Rumanians in London is said not to be so favorable because of the low prices for petroleum products in the United States. In view of the small amount of oil involved, however, the feeling is that the large companies may pay the Rumanians slightly more than Gulf Coast prices to obtain an agreement. Following the breakup of the conference with the Russians in New York last June, no negotiations, it is said, have been carried on with them relative to another conference, although reports have been current almost weekly since.

COASTAL PIPE LINE SOLD

The Coastal Pipe Line Co.'s pipe line from the Saxet Field, in Nueces County, Southwest Texas, to the docks at Corpus Christi, together with two 55,000-bbl. tanks at the dock terminal, have been sold to The Texas Company. The line was owned by William F. Morgan and has been running about 2,000 bbls. of crude oil daily. The line is 7 miles long.

SUMMARY OF STATEMENTS MADE FEBRUARY 10, 1933, RELATING TO BUSINESS OF VARIOUS PIPE LINES FOR MONTH ENDING JANUARY 31, 1933

	Gross stocks	Runs from wells	Other receipts	Regular deliveries	Other deliveries
Nat. Transit	605,963.33	219,447.23	1,017,279.45	540,616.88	665,458.13
S. W. Pa. P. L.	317,495.45	59,106.41	708,877.81	412,622.32	343,375.82
Eureka P. L.	1,003,236.10	232,631.15	230,611.73	204,817.90	265,190.26
Buckeye P. L. (Macksburg)	280,624.72	221,724.49	195,577.24	301,525.13	117,102.23
Buckeye P. L. (Lima, etc.)	2,466,700.56	77,464.09	2,058,273.59	1,386,405.35	831,589.46
Buckeye P. L. (Cleveland)	46,043.03	9,792.91	283,948.77	1,461.72	308,995.20
Indiana P. L.	436,146.50	1,000.75	1,271,613.31	988,542.81	355,305.57
Southern P. L.	158,404.30	.....	93,599.96	48,129.32	72,827.93
Bradford Trans.	253,310.49	377,801.00	.....	444,520.05	.....
N. Y. Transit	94,205.81	31,244.16	157,037.90	186,321.84	.....
Northern P. L.	232,037.48	.....	568,796.61	179,691.14	367,392.04
Tide Water P. L.	1,048,059.40	24,632.69	.....	454,239.61	.....
Tuscarora Dev.	9,273.96	.....	.....	268,410.59	.....
Valvoline P. L.	92,799.10	65,597.05	6,974.62	61,383.50	14,175.35
Total January 31	7,047,300.23	1,320,441.93	6,592,590.99	5,478,689.16	3,341,712.59
Total December 31	6,643,826.56	1,221,608.60	6,423,130.44	5,225,707.61	2,962,316.08
Difference	403,473.67	98,833.33	169,460.55	252,981.55	379,396.51

FRENCH-PERUVIAN DEAL?

A Santiago, Chile, dispatch to the New York Times says: Andres Guevara, representing the Argentine Daily Critica, who is passing through Chile after prolonged stays in New York and Lima, declared that the Peruvian government had sold to a French company a concession for oil deposits in the Amazon district.

Senor Guevara asserts his information was obtained in official quarters in Lima, although it had not been disclosed to the public. He says the agreement covers a period of 50 years and gives the Paris firm exclusive rights to explore and develop oil wells in the interior in exchange for important quantities of field artillery, rifles, ammunition and airplanes with which to carry on a war against Colombia.

Wildcat Operations in Southwest Texas

(Continued from Page 51)

Marts and Beavens' No. 1 Reyes, 750 ft. from W line, 150 ft. from S line of 68-ac. tract in Addison Lytton League ..... Location.

Properties Holding Co.'s No. 1 Henry Freitag, 400 ft. from SE line, 1,800 ft. from NE line of P. Conley Sur. ..... T.D. 2,234 ft; S.D.

H. Robertson's No. 1 Schmidt, 25 ft. from N line, 850 ft. from W line of D. H. Dyer Sur. ..... T.D. 400 ft.; S.D.

Texas and Gant's No. 1 Mikulec, 330 ft. to NW and SW lines of tract in Wm. Barton Sur. ..... T.D. 4,960 ft; drlg.

BEE COUNTY

Nichols & Bruner's No. 1 Grover Heidenfels in John Bryan Sur., 891 ft. from S line, 1,950 ft. from E line of tract ..... T.D. 4,440 ft; S.D. in top of Jackson; showed gas at 4,385 ft.

W. C. Pool's No. 1 J. C. Wood, 150 ft. N along E line of H.&G.N. Sur. from NE cor of Mary O'Connor lease, thence 450 ft. E at right angles ..... Rigged up.

BELL COUNTY

Gus Winston et al's No. 3 Warrick, 100 ft. N of No. 1 ..... T.D. 100 ft; drlg. shale.

James Scoggins No. 2 Warrick, 1,000 ft. to NW cor. 2,400 ft. to NE line of 335-ac. tract in Ingram Sur. ..... T.D. 1,481 ft; abd.

BEXAR COUNTY

C. I. Albertson's No. 1 Hoch, 750 ft. from S line, 650 ft. from W line of 339-ac. tract, in Jose Maria Baerera Sur. ..... T.D. 600 ft; standing.

Amsuen-Ingersoll-Miller's No. 1 Strumberg, 450 ft. to W line, 1,020 ft. to N line of tract, 12 miles SW of San Antonio ..... T.D. 1,135 ft; waiting for pump.

Wm. V. Ballard's No. 1-A S. A. Land & Dev. Co., I. Perez Sur. ..... T.D. 1,017 ft; setting csg.

E. R. Byrd's No. 1 W. H. Russell ..... T.D. 150 ft; drlg. shale.

R. S. Boling's No. 1 J. J. Appelt, 150 ft. from N and W lines of tract in M. Uriegas Sur. ..... T.D. 240 ft; fishing.

C. J. Lecompte's No. 4 R. Diaz, 324 ft. NE of No. 1 in Diaz Sur. ..... T.D. 100 ft.; drlg.

Motes-Campbell's No. 1 Pruitt, 550 ft. NE of Trussell's No. 1 Pruitt, 54 varas from E line of tract in Samuel McCollough Sur. ..... T.D. 400 ft; set 8-in. csg.

Ethridge et al's No. 1 Bilhartz, 150 ft. to N and E lines of SE 100 acres of Bilhartz 360-ac. tract in F. Rolen Sur. ..... Moving in.

Rollin V. Hill, Sr.'s No. 1 Max Boeck, 1,700 ft. from N line, 2,700 ft. from E line of tract in J. R. Shepherd Sur. ..... T.D. 406 ft; standing.

M. L. Howard's (Allen Park) No. 1 James Watson, 12 miles S from San Antonio ..... T.D. 3,535 ft; taken over from Allen Park; plugging back 10 ft.

O. L. Ray's No. 1 Thos. Dillon, 3,500 feet from NW line, 1,750 ft. from most southerly SW line of de Luna grant in southern part of county ..... T.D. 410 ft; drlg. shale and green sand 335-45 ft.

Sun Rise Oil Co.'s No. 1 R. J. Uecker, 150 ft. from N line, 450 ft. from W line J. M. Perez Sur. ..... Location.

Swearingen Oil Co.'s No. 1 W. H. Russell ..... T.D. 750 ft; drlg.

A. G. Venable's No. 2 F. Dulling, 1,500 ft. W of center of E line of tract ..... Location.

W. L. Whicker's No. 1 Bilhartz ..... Location N of No. 1 Strumberg, and W of No. 1 Carruth.

BLANCO COUNTY

H. T. McGee's No. 1 Forbes, cen. Sec. 167 ..... Spudded in on 6,000-ac. blk.

C. L. McLeary's No. 1 Meier ..... T.D. 860 ft; S.D. in lime.

Hardy Sitton's No. 1 Luders, 150 ft. from S line, 1,420 ft. from E line of James Stanford Sur. ..... T.D. 700 ft; S.D.

CALDWELL COUNTY

Fred Adams' of Lockhart No. 1 Robertson, 450 ft. from N and W lines of Robertson 100-ac. tract in John Neill Sur. ..... T.D. 1,920 ft; drlg.

Louis Crouch's No. 1 Sue Neelan, 1,500 ft. to SE lines, 150 ft. from NE lines of 200-ac. tract in John B. Gray Sur. ..... T.D. 1,302 ft; top of Georgetown.

B. D. Herne's No. 1 M. C. and P. W. Jeffrey 126-ac. tract, 150 ft. from N and E lines of tract in James George Sur. ..... Set surface pipe, waiting for wtr.

E. L. Hope and Joe Cole's No. 1 M. August, 150 ft. from NE line, 165 ft. from NW line of tract in A. Floyd Sur. ..... T.D. 600 ft; S.D. shale.

E. R. Thomas' No. 1 Alexander, 668 varas from NW lines, 334 varas from NE line of 158 acres in Spiller Sur. ..... T.D. 2,305 ft; abd.

DIMMITT COUNTY

Motes-Campbell's No. 1 Denton, 170 ft. from E line, 250 ft. from S line of Tracts 33 and 34, Sec. 60 ..... T.D. 1,370 ft; waiting for big rig.

DUVAL COUNTY

Commonwealth O. & G. Co.'s No. 1 J. Benavides, 330 ft. from SW and SE lines of Sec. 1, Carpenters Subd. of El Mesquite Grant Sur. ..... Rigging up.

Cowden et al's No. 1 State Bank of Alice, 209 ft. to S line, 1,450 ft. to W line of E. Valentine Sur. No. 26 ..... Steel derrick.

Huff & Kyle's No. 1 A. Roach, 865 ft. from E line, 45 ft. from S line of Blk. 7, Sur. No. 457 ..... T.D. 760 ft; drlg.

Ed Leach et al's No. 1 C. J. Bain, 330 ft. to S line, 330 ft. to E line of NW SW of Sur. 284 ..... T.D. 1,000 ft; drlg.

Magnolia Pet. Co.'s No. 1 Duval County Ranch Co., Sur. 308 ..... Derrick.

Newton et al's No. 1 Welder-Wood, 5,550 ft. from W line, 4,590 ft. from N line of Sur. 102 ..... T.D. 1,500 ft; drlg.

C. P. Scott's No. 1 J. W. Kidd, 990 ft. from N and E lines of SE of Sur. No. 56 ..... T.D. 2,264 ft; set csg.

Smith & Hunter's No. 1 Manuel Olivarez, 1,500 ft. SE of No. 1 Pena ..... T.D. 2,250 ft; drlg.

Wm. B. Stewart's No. 1 Duval County Ranch Co., 990 ft. to S and E lines, of NE of Sur. 362 ..... T.D. 800 ft; drlg.

Wm. B. Stewart's No. 2 Duval County Ranch Co., 330 ft. from N and W lines of N¼ SW of Sur. 362 ..... T.D. 1,576 ft; waiting for csg.

S.R.C. Oil Co.'s No. 1 Duval County Ranch Co., 150 ft. from N line, 4,200 ft. from W line of Sur. 192 ..... Rigging up.

S.R.C. Oil Co.'s No. 1 Hagist, 3,670 ft. from W line, 2,970 ft. from S line of Sur. No. 267 ..... T.D. 2,385 ft; abd.

Shasta Oil Co.'s No. 1-B Peters, 990 ft. from W line, 330 ft. from N line of NW SW Sur. No. 176 ..... T.D. 2,400 ft; coring.

FRIO COUNTY

James E. Greenlee's No. 1 W. W. Burns, 613 vrs. to N line, 900 vrs. to W line of Antone Hutzler Sur. ..... T.D. 1,230 ft; standing in shale.

GILLESPIE COUNTY

Rod Lagra's No. 1 Stephen, 500 ft. from N and W lines of A.B.&M. Sur. No. 969 ..... Spudded in.

GUADALUPE COUNTY

B. E. Brock's No. 1 Ogletree, 1,600 ft. from W line, 450 ft. from S line of tract in Robert Smith Sur. ..... T.D. 2,240 ft; drlg.

Keene & Russell's No. 1 Lowman, 300 ft. from E line, 350 ft. from N line of tract in George Allen Sur. ..... T.D. 380 ft; standing.

James Douglas' (Tyler) No. 1 E. Wilson, 303-ac., 150 ft. from N and W lines of E. Pettus Sur. ..... Location.
Seguin Oil Co.'s No. A. D. Mebane 61 ac., 440 ft. from W line, 500 ft. from S line, J. G. King Sur. ..... Location.
W. A. Scrutchin's No. 1 S. J. Lowman, 110 ft. from N line, 195 ft. from W line of 10-ac. tract, in Blk. 1, Sec. No. 1 of S. J. Barnes Sur. ..... T.D. 410 ft; standing.
Smith's No. 1 Lowman, offsetting old test of Humble. T.D. 450 ft; standing.

GONZALES COUNTY

Antibus et al's No. 1 James, 6,350 ft. from N line, 1,300 ft. from E line of Mary A. Williams Sur. ..... T.D. 2,506 ft; S.D.
Edmiston & Kirby Pet. Co.'s No. 1 J. W. Ward, Jr., 300 ft. from N line, 833 ft. from W line of tract in Dan McKay Sur. ..... T.D. 1,592 ft.; standing.

HIDALGO COUNTY

Barrett-Kanellos' No. 1 J. B. Brock, 7 miles W and N from Mission (on Monte Cristo road) ..... T.D. 4,590 ft; standing.
Carl & Johnston's No. 1 Doughty, 127 ft. from S and E lines of Lot 11, Blk. 5 of Subd. of Indios Ranch Sur. in N. Hidalgo ..... T.D. 1,475 ft; set csg.
Dayle L. Smith's No. 3 Daskam, SW part of county. T.D. 1,726 ft; standing.

JIM WELLS COUNTY

Magnolia Pet. Co.'s No. 2 A. A. Seeligson, 3,000 ft. from E line, 150 ft. from S line of V. Canales Sur. No. 218 ..... T.D. 3,250 ft; tested 300 ft. oil.
Milam Drlg. Co.'s No. 1 E. L. Armstrong, 330 ft. from N and W lines of Sur. No. 99 ..... Rigging up.

KARNES COUNTY

W. R. Campbell's No. 1 E. C. Gillett, 2,594 ft. from SE line, 810 ft. from SW line of 391.5-ac. tract in C. Martinez Sur. ..... T.D. 1,509 ft; drlg.
A. E. Edmiston's No. 1 G. W. Cross, 300 ft. from E line, 150 ft. from N line of tract in M. N. Reed Sur. .. Spudded in and S.D.
Hindeman et al's No. 1 F. C. Weinert ..... T.D. 1,081 ft; abd.
Sunshine Oil Co.'s No. 1 Canon, 3 mi. NE Karnes City. Making location.
Tippett & Mull's No. 1 Smith, 8,500 ft. from N line, 200 ft. from E line of Francis Haskins Sur., 3½ miles E of Helena ..... T.D. 20 ft; no report.

KENDALL COUNTY

Dupree et al's No. 1 Hagg, 600 ft. to S line, 2,700 ft. to W line of tract, B.B.B.&C. Sur. 91 ..... T.D. 20 ft; standing.
Verland Trust's No. 2 Willie Werner, 1,400 ft. N and 150 ft. W of No. 1 P. B. Sterling's No. 1 Willie Werner ..... T.D. 970 ft; hole lost.

KERN COUNTY

A. E. Anderson's No. 1 J. D. Witt, 1,320 ft. from N line, 1,220 ft. from W line of Sec. 1,923, in Hamilton Sur., 4 miles S of Center Point ..... T.D. 425 ft; drlg.
Van Dorn & Moore's No. 1 Nowlin, 2,000 ft. from E line, 2,200 ft. from N line of James R. Reitner Sur. T.D. 700 ft; drlg.

KLEBERG COUNTY

Harry Clark's No. 1 V. J. Kivlin, 360 ft. from E line, 400 ft. from S line of Sec. 39, Blk. 8, Kleberg Town & Improvement Co. Sur. ..... Location.
Harris et al's No. 1 Dennett, 600 ft. from S line, 760 ft. from E line of Blk. 7, Sec. 38, Kleberg Town & Imp. Co. Subd. ..... T.D. 2,797 ft; waiting on D.S.
H. Carter's No. 1 R. H. Simmons, 150 ft. from S and W lines of tract in Sec. 7, King Sur. No. 3 ..... T.D. 3,205 ft.; standing.

LA SALLE COUNTY

Interstate Oil Industries, Inc.'s No. 1 J. F. Mayes, 600 ft. from S and W lines of Blk. 20, I.&G.N. Sur. No. 19 ..... T.D. 2,825 ft; standing.

LIVE OAK COUNTY

J. A. Harper's No. 2 fee, center of Blk. 40 ..... T.D. 1,075 ft; drlg.
Humble O. & R. Co.'s No. 1 Albert West, 4,000 ft. S of river, 150 ft. from NW line of tract in Thos. Hammond Sur. ..... T.D. 2,093 ft; drlg.
Homer T. Lamb's No. 1 J. T. Brown, 150 ft. from N line, 2,450 ft. from W line of 692-ac. tract in M Hely Sur. ..... T.D. 1,204 ft; in sand; to make D.S. test.
C. J. Webster Oil & Gas Co.'s No. 1 O. F. Akers, 300-ac. tract in T. Henry Sur. ..... T.D. 100 ft.; standing.

LEE COUNTY

Paton Bros.' No. 1-B Turner, 424 ft. from NW line, 375 ft. from NE line of 51.9-ac. tract in David Hudson Sur. ..... T.D. 3,175 ft; pulled derrick in.
Sayre Oil Co.'s No. 1 Rister, 150 ft. from S and E lines of N 100-ac. Rister tract in J. V. Jamison Sur.. T.D. 205 ft; drlg.

MAVERICK COUNTY

B. R. Garrett and Mason Altgelt's No. 1 J. D. Beck, 730 ft. N of S line, 2,778 ft. W of E line, about 1¼ miles north of Eagle Pass on Del Rio Highway, Sur. 44 ..... T.D. 118 ft.; S.D.
H. E. Lewis' No. 1 Kifuri, 640 varas E of river, 140 varas from S line of Poindexter & Burns Sur. 31 T.D. 400 ft; drlg.

McMULLEN COUNTY

Gant & Teas' No. 1 E. R. Hagist, 330 ft. from N and W lines of SW of H.&T.C. No. 24 Sur. ..... T.D. 1,975 ft; drlg.
Jaqua & Crow's No. 1 Hagist, 330 ft. from N and W lines of R. W. Mills Sur. No. 467 ..... T.D. 1,618 ft; drlg.
Chas. B. Loftin's No. 1 R. H. Brown, in R. H. Brown Sur. No. 8 ..... T.D. 955 ft; abd.
Greenwood & Calvert's No. 1 G. A. Booth, 3,200 ft. from NW line, 7,000 ft. from SW line of 4 miles SW from Calliham ..... T.D. 921 ft; drlg.
Chas. B. Lofton's No. 2 R. H. Brown, 1,000 ft. from E line, 5,280 ft. from S cor. Duncan Sur. ..... T.D. 955 ft; abd.
C. C. Shumway's No. 1 Shiner, 400 ft. from W line, 200 ft. from N line of Blk. 45 of Shumway Subd. of Shiner ranch ..... T.D. 1,580 ft; drlg.
S. R. C. Oil Co.'s No. 1 La Chusa, 1,320 ft. to S and E lines of Sur. 47 ..... T.D. 1,370 ft; S.D.
Tarver & Nance Co.'s No. 2 Dickson Farm Mrtg. Co., 700 ft. due W of No. 1, 900 ft. from NE line, 300 ft. from SE line of survey, Sec. 45 ..... T.D. 682 ft; drlg.
Whisenant & Trenchard's No. 1 Martin ..... Making location.

MEDINA COUNTY

James E. Greenlee's No. 1 Feasler, 600 ft. from N line and 2,400 ft. from E line of L. G. Harrison Sur. No. 799 ..... T.D. 1,543 ft; abd.
Pearson O. & G. Co.'s No. 14 Suburban farms, 700 ft. from N line, 600 ft. from W line of 27-ac. tract in Blk. 3, M. W. Hewitt Sur. ..... Location.
W. L. Umburn's No. 1 Mangold, 300 ft. from E line, 150 ft. from S line of Isam Palmer Sur. ..... T.D. 1,005 ft; drlg.

MILAM COUNTY

Bridwell's No. 1 Terry, 1,100 ft. from N line, 800 ft. from W line of tract in Jose Leal Sur. ..... T.D. 2,460 ft; S.D.
Ed Clark et al's No. 1 Thos. Groos, 250 ft. from SW and NW lines of Jackson Hall Sur. ..... T.D. 130 ft; S.D.
Clark et al's No. 1 Hoppe, 450 ft. to NE lines, 450 ft. to SE lines of E. Hoppe 60-ac. tract in Juan Jose Acosta Sur. ..... T.D. 103 ft; standing.
Ed Clark's No. 1 Pritchard, 1,100 ft. to SE lines, 700 ft. to NE lines of 163-ac. tract in F. Ernst Sur., 6½ miles NE Thorndale ..... Rigged up.

NUECES COUNTY

John F. Camp's No. 1 King, 150 ft. from N and W lines of E½ Sec. 29 of Richard King Subd. Sur. .. Bldg. derrick.
Miller et al's No. 1 Harney, 200 ft. from NW line, 1,350 ft. from SW line of 445-ac. tract in Gregoria Farias Sur. ..... Moving in tools.
George Noble's No. 1 Homeland Syndicate, 300 ft. to SE and SW lines of Blk. 8, Sec. 12, 5 miles S Corpus Christi ..... Location.

STARR COUNTY

Adams & Modest's No. 1 Wood, 2,070 ft. from W line of Porcion 84, Camargo, and 1,472 ft. N of Missouri Pacific Railroad ..... Spudded in.
W. P. Chancellor's (Byron & Tharp) No. 1 A. Guerra, 26,000 ft. from S line, 2,600 ft. from E line of Share No. 6 of San Jose grant survey, from NE cor. of county ..... T.D. 1,100 ft; drlg.
B.&B. Oil Co.'s No. 1 Crown Brick & Tile Co., 1,800 ft. S of State Highway No. 4 and 580 ft. from W line of Porcion 87, near La Puerta ..... T.D. 4,526 ft; comp. fishing job; reaming at 3,725 ft.
Chiquita Oil Co.'s No. 1 Starr County Cattle Co., 341 ft. from W line, 271 ft. from S line of Share 60, Partition of Porcions 88 and 89 ..... Rigging up.
Coastal O. & G. Co.'s No. 1 Kelsey Bass, 448 ft. to N line, 150 ft. to W line of Tract 52, Sur. 2, Porcion 86. T.D. 1,860 ft.; changing to heavier rig.
F. R. Cooper's No. 1 J. M. Martinez, 150 ft. to S and E lines of A.B.&M. Sur. No. 135 ..... T.D. 1,265 ft; drlg.
John J. Erickson's No. 1 J. B. Brinton, 341 ft. from W line, 271 ft. from S line of Share 60, Partition of Porciones 88 and 89, Camargo ..... Location.
Four-In-One Oil Synd.'s (J. E. Waldron) No. 1 Marks Estate, 200 ft. SW of center of Sur. No. 483 (in Blk. 10) ..... Spudded in.
Goodwin & Yantis' No. 1 Walker, 450 ft. SE of W line of Isabel Lopez property in Sur. 767 ..... T.D. 810 ft; drlg.
Goodwin & Yantis' No. 1 Kelsey Bass, 150 ft. to N and W lines of Blk. 45, Sur. 2, Por. 86 ..... Location.
Great Plains Oil Co.'s No. 1 Sanchez, 660 ft. from W line, 330 ft. from S line of SE of NW of Sur. No. 344 ..... T.D. 1,928 ft; waiting for wtr.
Jeffries and Lambeth Drilling Co.'s No. 1 Starr County Cattle Co., 11,572 ft. from N line, 2,490 ft. from E line of Porcion 89, Jurisdiction of Camargo ..... T.D. 2,290 ft; standing.
R. McCormick's No. 1 I. G. Garcia, 1,260 ft. from N line, 438 ft. from E line of Blk. 11-B, Subd. of Pors. 71-72 ..... T.D. 330 ft; drlg.
A. C. McGahhey's No. 1 Fernandez Bros., 1,800 ft. from W line, three-quarters of a mile from Rio Grande River, in Porcion 99, Jurisdiction of Camargo ..... T.D. 180 ft; standing.
D. A. Miller's No. 1 Madrigal, 4,827 ft. to N line, 1,987 ft. to E line of Share 15, Porcions 67, 73, 1 mile NE of Roma ..... T.D. 380 ft; standing.
J. W. Steinward's No. 1 F. Dawson, 495 ft. from W line, 340 ft. from S line of tract in Blk. 6, Share 3-B of Porcion No. 70 ..... Location.
George Stobaugh's No. 1 Seabury et al, 150 ft. from S and W lines of Porcion 107 ..... T.D. 278 ft.; no report
Travelers Oil Co.'s No. 1 C. Ramos, 2,000 ft. from SW lines, 2,640 ft. from NW lines of Sur. 150 ..... Derrick.

TRAVIS COUNTY

J. L. Collins & Co.'s No. 1 John Carlson, 630 ft. to NE lines, 1,570 ft. from SE lines of 177-ac. tract in W. W. Smith Sur. ..... T.D. 1,500 ft; abd.
Franklin's No. 1-A Reimers, 200 ft. NE of No. 1 Reimers, or 1,200 ft. from SE line and 1,600 ft. from most southerly SW line of Sur. No. 35 ..... T.D. 150 ft; drlg.
Robinson et al's No. 1 O. L. Brady, 155 ft. to N line, 300 ft. to W line, McMillan Sur. ..... Abd. location.
Watson et al's No. 1 Maggie Kee Brady, 880 vrs. to NW line, 54 vrs. to NE line of Elkins McMillan Sur. ..... T.D. 492 ft; S.D. in shale.

UVALDE COUNTY

Evans & Thompson's No. 1 Farris, 400 ft. from S and W lines of 535-ac. tract near center of John J. Hammond Sur. No. 654 ..... Location.
J. V. Scarborough No. 1 Olive Henry, 1,100 ft. from N and E lines of tract in Hugh Kilgore Sur. ..... T.D. 715 ft; drlg.

WEBB COUNTY

Earl Calloway et al's (Osborne) No. 1 Gates, 330 ft. from N and W lines, SE Sec. 14, Blk. 1 (Gates ranch), C.C.S.D.&R.G.N.G.R.R. Sur. ..... Derrick.
Cole Pet. Co.'s No. 1 A. Villareal, 330 ft. from S and W lines of Sur. No. 1,090, 5 miles E of Oilton ..... Rigging up.

WILSON COUNTY

Sexton Pet. Co.'s No. 1 Joe Gutzeit (1,032-ac.), 150 ft. from W line, 150 ft. from S line of road of F. Flores No. 18 Sur. ..... Spudded in.

WILLIAMSON COUNTY

McLean et al's No. 2 R. C. Miller, 800 ft. to S line, 100 ft. to W line of tract in R. Manlove Sur. ..... T.D. 1,910 ft; drlg.
E. F. Smith's No. 1 H. C. Braker, 1,600 ft. to SW lines, 900 ft. to NW lines of E. J. Mahan Sur. ..... T.D. 513 ft; abd.
R. S. Wilson's No. 1 Gray ..... T.D. 1,140 ft; abd.

ZAPATA COUNTY

Hamilton, Brower & Crow's No. 1 Slator, 2,111 ft. from SW line, 1,980 ft. from SE line of Blk. 1, Subd. of Slator ranch in J. V. Borrego grant ..... T.D. 1,000 ft; drlg.
O. W. Killam's No. 2 A. M. Bruni, 650 ft. from NE line, 620 ft. from SE line of Blk. 43, Killam Subd., J. V. Borrego Grant Sur. ..... T.D. 950 ft; drlg.
Stevens & Brown's No. 1 J. M. Garcia, 150 ft. from NE line, 260 ft. from SE line of Blk. 102, Sur. 434.. Location.
A. C. Savey et al's No. 1 Flores, 150 ft. from NW line, 206 ft. from NE line of Blk. 8, Share 1 of P. A. Richer Subd. of Porcion No. 36 ..... T.D. 600 ft; drlg.

ZAVALA COUNTY

Adair & Daniel's No. 1 Gates, 1,320 ft. from N line, 1,220 ft. from E line of Hooper & Wade Sur. No. 13.. T.D. 3,920 ft; standing.

Southwest Texas Proven Areas

Week Ending March 4

RIDDLE POOL—BASTROP COUNTY

Company, well, farm name, section and block—	Remarks:
Ogden & Reed's No. 8 Riddle, 600 ft. S and E of No. 1 Riddle in 94.5-ac. tract in Joshua Gray Sur.	Rigging up.

NORMANNA POOL—BEE COUNTY

Gulf Coast Oil Co.'s No. 5 Hicks, 600 ft. E of Nichols Oil Co.'s No. 2 Hicks	T.D. 4,060 ft; comp. small well.

TULETA POOL—BEE COUNTY

Grisham et al's No. 1 Rapp & Hatch, center of SW 40 acres of 217.5-ac. tract in Sec. 12 of Jose Maria Uranga Grant Sur.	Derrick.
Taber et al's No. 1 Harris, 150 ft. from N and W lines of Blk. 13, Sec. 13, Ragsley Subd. of Uranga grant ..	T.D. 4,323 ft; reinstated; plugging back to Pettus sand; perforating csg. at 4,110-30 ft.
The Texas Co.'s No. 2 Cox, 330 ft. from S and E lines, of SE SW Sec. 2, Ragsley Subd. Uranga Grant Sur..	T.D. 4,275 ft; drlg.
The Texas Co.'s No. 2 Cox, 330 ft. from S and E of SE of SW Sec. 2, Ragsley Subd. of Uranga tract....	Location.

COOKSEY POOL—BEXAR COUNTY

Chiquita Oil Co.'s No. 4 A. C. Hunter, 660 ft. E of No. 3 Hunter in Sec. 14, J. Martinez Sur.	T.D. 2,219 ft; abd.

GAS RIDGE—BEXAR COUNTY

American Gas Co.'s No. 5 W. H. Kennon, 1,750 ft. from S line, 2,000 ft. from E line of 400-acre tract in Maria F. Rodrigues Sur	T.D. 2,230 ft; T.A.

ECKERT POOL—BEXAR COUNTY

Alamo Nat. Gas Co.'s No. 3 J. H. Gembler, 180 ft. from N and E lines of tract in A. Manachaca Sur. 51.	T.D. 1,216 ft.; standing.
Bowman & Richards' No. 3 Halbardier, 1,920 ft. to E along N line of Jose M. Perez Sur. from W of NW cor., 160 ft. S of N line of same survey	Location.
Charles P. Cartter's No. 2 Gembler	T.D. 510 ft; drlg.
F. H. Eckert & Son's No. 2 A. C. Brehm, 150 ft. from E line, 310 ft. N of No. 1	T.D. 655 ft; depth corrected.

F. H. Eckert's No. 6 Louis Brehm, 320 ft. S of No. 5, 150 ft. to S line, 480 ft. to E line, Boquar Sur. ..... Spudded in and S.D.
Gatlin Oil Co.'s No. 15 I. A. Beck, 150 ft. from S and E lines of tract in J. Montes Sur. ..... T.D. 723 ft; set csg.
D. C. Pegg's No. 3 Gembler, 200 ft. from E line, 630 ft. from S line of 100-ac. tract in Sec. 4, Sur. No. 51. Location.
C. W. Richards' No. 3 Halbardier, 350 ft. N of No. 1 Halbardier on 35-ac. tract in Perez Sur. No. 57 ..... Location.
C. W. Richards' No. 6 Halbardier, 150 ft. from N line, 465 ft. from E line of 32-ac. tract in I. Perez Sur. No. 57 ..... Location.
W. R. Swearingen's No. 11 Halbardier, 400 ft. SE of No. 10 Halbardier, J. P. Perez Sur. ..... Location.

DUNLAP POOL—CALDWELL COUNTY

Bob Rose's No. 2-B Walker 46-ac. tract, 360 ft. from NW line, 600 ft. from SW line of tract in Solomon Seal Sur. ..... T.D. 2,372 ft.; waiting for pump

SALT FLATS—CALDWELL COUNTY

Hickman et al's No. 1 C. A. Dickerson, 150 ft. N of cen. of S line of tract in John D. Rains Sur. ..... T.D. 2,363 ft; fishing.

NORTH GOVERNMENT WELLS POOL—DUVAL COUNTY

Central Producers' No. 6 Tuck-Johnson, 330 ft. to N and E lines of SW SW of Sur. 42 ..... T.D. 2,292 ft; comp. 20 bbls. hrly.
H. H. Coffield's No. 5 H. Wendt, 510 ft. to E line, 330 ft. to S line, SE NE Sur. 45 ..... Derrick.
W. T. Daniels' No. 1 F. J. Smith, 330 ft. from N and W lines of SW of NE of Sur. No. 46 ..... T.D. 2,000 ft; drlg.
Hester Bros.' No. 1 fee, 330 ft. from S and E lines of NE of Sur. No. 47 ..... Rigging up.
Highland Oil Co.'s No. 7 Lundvall, 330 ft. to N and E lines of 8½ of NE of Sur. 42 ..... Location.
Highland Oil Co.'s No. 8 Lundvall, 330 ft. to S and E lines of 8½ of NE of Sur. 42 ..... Location.
Magnolia Pet. Co.'s No. 6 J. V. Allen, 330 ft. from S line, 990 ft. from E line of S of SE of Sur. No. 42. T.D. 2,292 ft; comp. 8 bbls. hrly.
Magnolia Pet. Co.'s No. 5-A Hahl, 660 ft. N of No. 4 Hahl ..... Rigging up.
Magnolia Pet. Co.'s No. 4 B. White, 330 ft. from N line, 990 ft. from W line of N NW Sur. 64 ..... T.D. 2,307 ft; plugged back.
Navarro Oil Co.'s No. 2 C. W. Hahl, 330 ft. from S and W lines of SE SW of Sur. No. 369 ..... T.D. 1,950 ft; drlg.
San Diego Oil Corp.'s No. 5 E. Riley, 330 ft. from S and W lines of NW NW of Sur. No. 46 ..... T.D. 2,286 ft; abd.
San Diego Oil Corp.'s No. 3 L. Bennett, 600 ft. N of No. 1, 250 ft. to W line of SE SW of Sur. No. 44. Comp. 30 bbls. hrly.
San Diego O. & G. Co.'s No. 2 Heller, 300 ft. to S and W lines of SW SE of Sur. 44 ..... Location.
Southwest Drlg. Co.'s No. 7 Wendt, 330 ft. from S and E lines of SW SE Sur. No. 43 ..... Set csg. 2,252 ft.
The Texas Co.'s No. 5 D. J. Freer, 510 ft. from W line, 330 ft. from N line of N of NE of Sur. No. 45..... T.D. 2,279 ft; 20 bbls. hrly.
The Texas Co.'s No. 6 D. J. Freer, 1,470 ft. from E line, 330 ft. from N line of N of NE of Sur. No. 45..... T.D. 2,257 ft; comp. gas well.
The Texas Co.'s No. 7 Johnson, 990 ft. from E line, 330 ft. from N line of 8½ NW 3-4, Sur. No. 42..... Location.
Whisenant et al's No. 5 Hahl, 330 ft. to N and W lines of SW SW of Sur. 44 ..... Location.
Wilkins Seacord's No. 2 E. C. Lundell, 150 ft. from N and E lines of Sur. No. 43 ..... T.D. 2,333 ft; tested gas.

SOUTH GOVERNMENT WELLS POOL—DUVAL COUNTY

Humble O. & R. Co.'s No. 11 Paul White, 990 ft. from S line, 1,320 ft. from E line of Sur. No. 249 ..... Derrick.

SARNOSA POOL—DUVAL COUNTY

Atravasada Oil Co.'s No. 1 P. Henrandez, 330 ft. to NW and SW lines of E half of Sur. 574 ..... T.D. 2,400 ft; coring.
Magnolia Pet. Co.'s No. 1 D. Ruiz, 320 ft. from NW and SW lines of Sur. No. 127 ..... Spudded in.
Sun Oil Co.'s No. 2 Cuellar (Cano), 150 ft. from SW and SE lines of E quarter of Sur. No. 574..... Rigged up.

SAL-MAR POOL—GUADALUPE COUNTY

Sal-Mar Oil Co.'s No. 1 Chas. Woehler, 1,040 ft. from N line, 300 ft. from E line of G. W. Williams No. 46.. Rigging up.

HORD'S CREEK—GOLIAD COUNTY

Sam Vanderweiss' No. 1 Kaufman, 3,700 ft. NE of NE line of B. Merrill Sur., 300 ft. NW of NW line of Vincente Ramos Sur. ..... T.D. 4,554 ft.; abd.

ALWORTH FIELD—JIM HOGG COUNTY

H. C. Cate's No. 1 B. J. Leyendecker, 70 ft. to E line, 320 ft. to S line, Blk. 10, Sur. 143 ..... T.D. 1,132 ft; standing.

SANDIA POOL—JIM WELLS COUNTY

Crude Oil Royalty Co.'s No. 1 Allen (first carried as Hughes & Long's No. 1 Wade), Cen. Blk. 3, Wade ranch ..... Rig on ground.
Larero Gas & Pet. Co.'s No. 3 Wade, 2,000 ft. S, 33 deg. W of No. 2 Wade, thence 1,970 ft. N, 57 deg. W.... Material on ground.

JACOB POOL—McMULLEN COUNTY

Lefevre & Spice's No. 1 Jacob, 2,666 ft. to S line, 1,260 ft. to E line of J. Poitevent Sur. 53 ..... T.D. 1,006 ft; abd.
Longhorn Oil Co.'s No. 2-A C. T. Lark, E. W. B. Scrugham Sur. ..... Rigging up.
Tarver & Nance's No. 2 Dickson Farm Mrtg. Co., 700 ft. due west of No. 1 ..... T.D. 150 ft; drlg.

ADAMS FIELD—MEDINA COUNTY

Yantis Oil Co.'s No. 1-A Adams, 50 ft. from No. 1 ..... T.D. 680 ft.; S.D.

SAXET POOL—NUECES COUNTY

Holliday et al's No. 1 Smith, 330 ft. from S and E lines of 700-ac. tract ..... T.D. 4,797 ft; drlg.
Gibson Oil Co.'s No. 2 Rand Morgan, 1,320 ft. from N line, 330 ft. from E line of lease ..... Rigging up.
Gibson Oil Co.'s No. 1 F. J. Smith, 330 ft. to S and E lines of Shepherd Farm Lots No. 35 ..... T.D. 974 ft; drlg.
Gulf Coast Oil Co.'s No. 2 Perkins & Lagasse, 650 ft. from N line, 990 ft. from E line, Sec. 36, Shepherd farm lots ..... T.D. 5,060 ft; plugging back to 4,500 ft; comp. 150 bbls. daily.
Gulf Port Oil Co.'s No. 1 Isencoe, 330 ft. to N and W lines of 300-ac. tract in C. Land Sur. ..... Location.
Gulf Port Oil Co.'s No. 3 Frank Bliss, 1,899 ft. to N line, 350 ft. to E line of 325-ac. tract in J. W. Stevens Sur. No. 406 ..... T.D. 4,059 ft; S.D.
Gulf Port Oil Co.'s No. 3 Humphreys, 115 ft. from N line, 330 ft. from W line of lease (8 offset to No. 1 Gibson, Rand Morgan Sur.) ..... Rigging up.
Gulf Port Oil Co.'s No. 1 Rand Morgan, 330 ft. from N and E lines of 30-ac. lease ..... T.D. 2,622 ft; drlg.
Houston Oil Co.'s No. 3 McGregor, 287 ft. from E line, 330 ft. from S line of tract ..... T.D. 2,458 ft; drlg.
Shasta Oil Co.'s No. 2 Quiros, 330 ft. S of road, 330 ft. from N and E lines of Lot 40 of Shepherd Subd. ... Location.
Shasta Oil Co.'s No. 1 Quiros, 330 ft. from N and E lines of Lot 39, Sur. No. 911 ..... T.D. 4,949 ft; drlg.
Texas Coast Oil Co.'s No. 1 Clark-Morgan, 330 ft. from S and E lines of N½ of Sur. No. 406..... T.D. 4,572 ft; drlg.
Titus & Calloway's No. 3 Lagasse, 330 ft. from N and W lines of E half of Blk. 25 of Shepherd farm lots.. Temp. abd.
Titus & Calloway's No. 1 Ran Morgan, 330 ft. from N and E lines of W 80 acres of E 160 acres of N half of 423 acres of B.S.&F. Sur. No. 403 ..... Temp. abd.
Violet Oil Co.'s No. 1 McGregor-Polk ..... T.D. 4,374 ft; S.W.

MATHIS POOL—SAN PATRICIO COUNTY

Geo. W. Scruggs' No. 1 Collins ..... T.D. 600 ft; drlg.

WHITE POINT FIELD—SAN PATRICIO COUNTY

Saxet Oil Co.'s No. 19 Rachel ..... T.D. 5,703 ft; drlg.

LOS OLMOS POOL—STARR COUNTY

Austin et al's No. 1 Kelsey Bass, 150 ft. to N and W lines of NW of NW of Sur. 4, Porcions 75, 76, 77, Jurisdiction of Camargo ..... Rigging up.
Columbia Royalty Co.'s No. 1 Kelsey Bass, 150 ft. from N and E lines of Sur. 6, Sub. of Porcs. 75, 76 77, Jurisdiction Camargo ..... Location.
Floyd-Doyno-Tolands' No. 1 Seabury, 840 ft. from S line of Doyno 80 acres, Share 5, Por. 75, Camargo Sur.. T.D. 460 ft; drlg.
Goodwin & Yantis' No. 1 Kelsey Bass, 150 ft. to S and E lines of SE of NW of Sur. 3, Porcions 75, 76, 77 .. Rigging up.
Goodwin & Yantis' No. 1 Seabury, 150 ft. from N and E lines of N 80 ac. of Share 5, W portion of Porcion 75, Camargo ..... T.D. 1,275 ft; drlg.
Holloway & Tilton's No. 1 Doyno, 150 ft. from N and W lines of 28-ac. tract, Share 16 of Porcion No. 75 Sur. ..... Location.
Hooks & Weavers' No. 14-A2 Kelsey Bass, 200 ft. from W line, 250 ft. from S line of E 30 acres of NE SW Sec. 6, Pors. 75, 76, 77, Camargo ..... Rigging up for 3,000-ft. test.
Hooks & Weaver's No. 14 Kelsey Bass, 150 ft. from E line, 250 ft. from S line, NE SW Sec. 6, Porcions 75, 76, 77, Camargo ..... T.D. 600 ft; abd.
R. A. Mitchell's No. 1 Kelsey Bass, 150 ft. from S and W lines of NW SE of Sur. 8, Subd. Porcions 75, 76, 77, Jurisdiction of Camargo ..... T.D. 405 ft; drlg.
C. L. Sinclair's No. 2 Kelsey Bass, 150 ft. to S line, 1,950 ft. to W line of SW of SW of Sur. 4, Porcions 75, 76, 77 ..... T.D. 839 ft; standing.

RIO GRANDE CITY POOL—STARR COUNTY

Chiquita Oil Co.'s No. 1 Jones & Doyno, 870 ft. to W line, 150 ft. to N line of Blk. 5, Share A-77, Por. 81, Camargo ..... T.D. 1,486 ft; abd.
Howard Stagg's No. 1 Ida Davis, 150 ft. from S and W lines of Blk. 16, Tract 4, Porcs. 18, Camargo.... T.D. 1,518 ft; abd.

AVIATOR POOL—WEBB COUNTY

Nueces Dev. Co.'s No. 1 Puig, 150 ft. from W line, 260 ft. from N line of Blk. 12, Edington Subd., Albercas Grant Sur. ..... T.D. 582 ft; standing.

LAUREL POOL—WEBB COUNTY

Dyck Oil Co.'s No. 3 Garcia-Villareal, 450 ft. from N line, 150 ft. from E line of NE NW of Sur. No. 1,100. T.D. 500 ft; drlg.
L. M. Kaiser's No. 1 Garcia & Villareal, 150 ft. to N and W lines of Blk. 2 Sur. 1,099 ..... T.D. 2,440 ft; drlg.
O. W. Killam's No. 2 Garcia-Villareal, 150 ft. from N and W lines of NE SE of Sur. No. 1,100..... Location.
Magnolia Pet. Co.'s No. 3 Garcia-Villareal, 150 ft. from W line, 470 ft. from N line of NW NE of Sur. No. 1,100 ..... Location.
Magnolia Pet. Co.'s No. 4 Garcia-Villareal, 150 ft. from N line, 450 ft. from W line, NW NE of Sur. No. 1,100 ..... T.D. 2,268 ft; testing.
Magnolia Pet. Co.'s No. 2 Garcia Villareal, 150 ft. from N and W lines of NW NE Sur. 1,100 ..... Reported comp. as No. 1; the No. 1 is dry hole drilled several yrs. ago.
Newton Drilling Co.'s No. 1 A. Garcia, 2,550 ft. from S line, 2,340 ft. from W line of Sur. No. 52, 2 miles SW of Carolina Texas Field ..... T.D. 2,330 ft; abd.
Reward Oil Co.'s No. 1 Garcia & Villareal Co., 330 ft. from N and W lines of NW SE of Sur. 1,100..... Location.
Sal-Mar Oil Corp.'s No. 1 Vela, 660 ft. from NW and SW lines of Blk. 16, Sur. No. 1,011 ..... Location.
Smith & Story's (Wolcott & Rehmet) No. 1 Sarah Lloyd, 600 ft. from W line, 150 ft. from S line of SW SE (Blk. 14), Sur. 33 ..... T.D. 2,850 ft; standing.
South Texas Oil Co.'s No. 6 Laurel, 150 ft. from S and W lines, Blk. 13, Sur. No. 270 ..... Location.
South Texas Oil Co.'s No. 11 Laurel, 211 ft. from E line, 150 ft. from S line of Blk. 16, Sur. 271 ..... T.D. 2,224 ft; est. 100 bbls. daily.
South Texas Oil Co.'s No. 1 Garcia & Gates, Sur. 272... T.D. 1,000 ft; drlg.
South Texas Oil Co.'s No. 1 Garcia & Villareal, Sur. 1,099.. Location.

MOCA POOL—WEBB COUNTY

S. R. C. Oil Co.'s No. 1 Duval County Ranch Co., 1,069 ft. N, 250 ft. E from Moca Oil Co.'s No. 1 in League 3 of Zapata County school land ..... T.D. 908 ft; set csg.
Whisenant & Trenchard's No. 1 Duval County Ranch Co., 150 ft. from N and W lines of Blk. 17, Duval County school land, Sur. No. 101 ..... T.D. 1,125 ft; drlg.

ESCOBAS POOL—ZAPATA COUNTY

Lefevre et al's No. 1 M. Garza Hrs., 330 ft. from NW and SW lines of Blk. 53, C. A. Douglas Subd., Zerro ranch, Comitas Grant Sur. ..... T.D. 825 ft; drlg.
McCormick et al's No. 1 Bustamente, 300 ft. from NE line, 375 ft. from NW line of SE¼ of Share 35, Comitas grant ..... Rigging up.
The Texas Co.'s No. 20 Measles, 3,425 ft. from SE line, 19,545 ft. from SW line of Cerrito Blanco grant..... T.D. 505 ft; drlg.
The Texas Co.'s No. 17 Measles ..... Making location.

MARTINEZ POOL—ZAPATA COUNTY

P. H. Neilson's No. 1 A. Trevino, 200 ft. from S line, 770 ft. from E line of Blk. 10, Sur. No. 411..... Rigging up.

Wildcat Operations in Louisiana-Arkansas

(Continued from Page 46)

Geo. L. Pace's No. 1 John Cole, 200 ft. N, 150 ft. E, SW cor. SE NE Sec. 11-11-11 ..... Rig up.
Jerry Ryan's No. 1 Sample, 330 ft. N and W, SE cor. SW NE Sec. 33-13-12 ..... Location.
G. C. Smith et al's No. 1 Wolluma, 330 ft. N and W, SE cor. Sec. 30-13-12 ..... S.D. chalk 1,520 ft.
E. J. Stanberry's No. 1 Naberton O. & G. Co., Sec. 32-13-11 ..... S.D. fuel 1,250 ft.
State Drlg. & Prod. Co.'s No. 1 Wemple, 330 ft. N and E, SW cor. NW SW Sec. 14-12-11 ..... S.D.; repairs 1,700 ft.
Jack Whitson's No. 1 Sanders, 330 ft. N and E, SW cor. Sec. 19-11-13 ..... S.D. 2,763 ft.
Warren & Craig's No. 1 J. A. Wagner, 150 ft. S and W from C, Sec. 5-13-14 ..... S.D. 2,820 ft; (C.D.).

GRANT PARISH

A. W. Phillips, tr.'s No. 1 Cameron, 300 ft. N, 200 ft. E, SW cor. SW NW Sec. 26-7-3w ..... Cmtd. 10-in.; S.D. 100 ft.
H. H. Temple's No. 1 Edenborn Est., 2,640 ft. E, 550 ft. S, NW cor. Sec. 20-7-3w ..... Derrick pattern.
H. H. Temple's No. 1 Guaranty State Bank, 300 ft. E, 200 ft. S, NW cor. Sec. 9-5-1..... Derrick.

JACKSON PARISH

A. C. Thomas' No. 1 J. W. Johns, SE cor. NE NE Sec. 25-15-3 ..... Rigging up.

MOREHOUSE PARISH

H. G. Samson's No. 1 Barnes & Sullivan, NE cor. SW Sec. 12-21-7 ..... Rigging up.
H. W. Snowden's No. 1 Meyers, 330 ft. S and E, SW cor. NE NE Sec. 15-22-7e ..... S.D. 30 ft.

NATCHITOCHES PARISH

Allender & Rasmussen's No. 1 Cane River, 330 ft. N and W, SE cor. Sec. 31-4n-5w ..... S.D. 100 ft.
W. M. Coates' No. 1 Ross Olive, Sec. 10-9-10, 660 ft. S and E from cen. of Sec. ..... S.D. fuel, 2,150 ft.
DeSoto Bros.' No. 1 Smith, 1,000 ft. N, 2,000 ft. E, NE cor. Sec. 16, in Sec. 11-10-8 ..... Coring F.W. sand 517 ft.
J. B. Oil Co.'s No. 1 Hankins et al, Sec. 67-10-7 ..... S.D. 670 ft.
Natchitoches Pet. Co.'s No. 1 Edenbarn, 2,240 ft. W, 1,320 ft. S, NE cor. Sec. 4-11-6w ..... Coring 2,890 ft.
Sampson et al's No. 1 Friedman estate, 406 ft. N, 428 ft. E SW cor. Friedman estate in Sec. 52-7-6 ..... Moving in rig.
Texana Oil Co.'s No. 1 Clark-Morris Lbr. Co., 875 ft. N, 540 ft. E, C, Sec. 23-5-6 ..... Recmtd. 6-in. 3,300 ft; T.D. 3,475 ft.

OUACHITA PARISH

Inabnet & Pipe's No. 1 Van Horn, 1,980 ft. N, 660 ft. E, C Sec. 14-18-5 ..... Rig up; W.O.

Milhivan Gas Corp.'s No. 1 W. Va. L. & T. Co., 1,980 ft. E, 1,320 ft. N, center Sec. 10-17-5e ..... Location.
Monroe Oil & Royalties Co.'s No. 1 Thisler, 150 ft. N and E, SW cor. SE NW Sec. 34-18-2e ..... S.D. fuel 2,891 ft.
Southren Carbon Co.'s No. 15 Fairbanks, 1,920 ft. N, 440 ft. W, SE cor. Sec. 5-19-4 ..... S.D. repairing rig.

RAPIDES PARISH

T. J. Alder et al's No. 1 Baum, 600 ft. N and E, SW cor. NE SW Sec. 27-6-2e ..... Derrick.
Evers & Collingsworth's (was A. G. Beck et al) No. 1 Hickman-Simmons Lbr. Co., 330 ft. S, 330 ft. E. NW cor. Sec. 40-4-1e ..... Drlg. 600 ft.
Pet. Industries, Inc.'s No. 1 Lee Lbr. Co., 330 ft. N, 300 ft. W, SE cor. NW SE Sec. 12-5n-2e ..... Derrick.

RED RIVER PARISH

Edward & Clay's No. 1 Delta Pecan Co., 1,400 ft. N, 450 ft. E, SW cor. Sec. 27-13-11 ..... S.D. 1,700 ft.
H. M. Jones' No. 1 A. N. Sample, 330 ft. S, 330 ft. E, NW cor. Sec. 10-14-11 ..... Rigging up.
G. T. Shaw et al's No. 2 Wilkinson, 330 ft. N, 460 ft. W, SE cor. NE SE Sec. 4-13-10 ..... 700 ft. oil in hole; fishing swab.

RICHLAND PARISH

Humble Prod. Co.'s No. 1 fee, SW NW Sec. 11-14-4 ..... Location.

SABINE PARISH

Craft & Primm's No. 1 C. Alford, 720 ft. S, 460 ft. E, NW cor. SW NW Sec. 18-7-10 ..... Bailed small S.O.; S.D. 2,660 ft.
J. G. Peterbourgh's (was Ellis & Dumas') No. 1 Pickering Lbr. Co., 400 ft. S and E, NW cor. SW SE Sec. 13-4-12 ..... Began drlg. Feb. 22; 10-in. 40 ft; drlg. 850 ft.
Feazel & Davenport's (was Flinchbaugh & Myers) No. 1 Aaron, 250 ft. S and E, NW cor. Sec. 32-9-13..... S.D. fuel 855 ft.
R. L. Gay, tr.'s No. 1-A Long Bell Lbr. Co., 430 ft. S, 300 ft. W, NE cor. NW NW Sec. 10-8-13 ..... Cored hard lime and shale 7,109 ft.; S.D. 7,154 ft.
R. T. Henderson's No. 1 Sistrunk, 450 ft. N, 150 ft. W, C, Sec. 9-9-13 ..... Arranging test 2,079 ft.
Hells et al's No. 1 Sabine State Bank, 350 ft. N and W, SE cor. SW SW Sec. 28-8-11 ..... Cmtd. 6-in. top marl, 2,236 ft.; bailed dry; drlg. 2,385 ft.
Ab Jones' No. 1 Garcia, 300 ft. S and W, NE cor. NW SE Sec. 4-7-13 ..... T.A. 2,070 ft.
G. E. Jordan's No. 1 Dew, 330 ft. N, 340 ft. E, SW cor. SW SE Sec. 34-8-11 ..... S.D. 2,635 ft.
G. W. Langley et al's No. 1 Peavy-Wilson Lbr. Co., 330 ft. S and W, NE cor. Sec. 16-5-9 ..... Derrick.
Geo. LeGrand's No. 1 McGough, 300 ft. S, 300 ft. E, NW cor. SW NW Sec. 2-8-10 ..... S.D. 2,410 ft.
C. D. Loe, tr.'s No. 1 Whitney, 330 ft. N and W, SE cor. NW NE Sec. 13-9-14 ..... S.D. 1,715 ft.
Ben Merritt's No. 1 Lucina, 400 ft. N, 378 ft. E, SW cor. SW NE Sec. 4-8-13 ..... Derrick.
Roy Raines et al's No. 1 Beard, 720 ft. E, 700 ft. N, SW cor. SW SE Sec. 8-8-10 ..... S.D. 1,200 ft.
Thornton et al's No. 1 S. S. Martinez, 355 ft. S, 330 ft. W, NE cor. SE NE Sec. 4-7-13 ..... S.D. 2,048 ft.
Otis A. Roberts' No. 1 Sabine Lbr. Co., 224 ft. S, 481 ft. W, NE cor. SW NE Sec. 5-7-13 ..... S.D.; W.O. 2,500 ft.
Roberts & Sledge's No. 1 La. Long Leaf Lbr. Co., 290 ft. N, 468 ft. E, SW cor. NE SE Sec. 29-8-10 ..... S.D. 2,050 ft.
Roberts & Sledge's No. 2 Sabine Lbr. Co., 803 ft. W, 796 ft. N, SE cor. SE SW Sec. 5-7-13 ..... W.O.S.R. 2,480 ft.
Roshko & LaBane's No. 1 Maines, 427 ft. E, 114 ft. N, SW cor. SE SE Sec. 35-8-11 ..... Cmtd. 6-in. in top marl 2,336 ft.
State Prod. Co.'s No. 1-B O. B. Davis, SW Sec. 17-7-10.. Derrick.

CONVERSE DISTRICT

Alford & Cleary's No. 1 Jackson, 330 ft. N and E, SW cor. SE NW Sec. 10-9-13 ..... Location.
Cloud & Bolin's No. 1 Bowman-Hicks, SE cor. NE NE Sec. 26-9-13 ..... Coring 3,250 ft.
Evans Bros.' No. 1 Cranford, 300 ft. S, 300 ft. W NE cor. SE SE, Sec. 20-9-13 ..... Cmtd. 8-in. top marl, 1,482 ft.; bailing to test 14-ft. limey shale; T.D. 1,504 ft; bailed small S.O.; S.D. 1,574 ft.
Lambert et al's No. 1 Edwards, 300 ft. S and E, NW cor. SW NW Sec. 29-9-13 ..... Tested dry; S.D.; W.O. 1,948 ft.
H. C. Lessenger's No. 1 Bowman-Hicks, 330 ft. S, 330 ft. E, NW cor. Sec. 13-9-13 ..... Began drlg. Feb. 24; 10-in. 40 ft.
Lee & Burnett's No. 1 Burckett, 330 ft. N and W, SE cor. NW SW Sec. 10-9-13 ..... Tested dry 1,795 ft; W.O.
Joe Modisette's No. 1 Frost Lbr. Industries, 330 ft. S and W, NE cor. Sec. 20-9-13 ..... Moving in rig.
Hy Rockmill's No. 1 Cassell, 330 ft. S, 330 ft. W, NE cor. Sec. 35-9-14 ..... Derrick.
Chief Oil Co.'s (was Rockmill et al's) No. 1 Bowman-Hicks, 330 ft. S and W, NE cor. NW Sec. 36-9-14.... Tested dry; S.D. 1,681 ft.
Nick Barbare's No. 1 Ryals, 330 ft. S and E, NW cor. Sec. 27-9-13 ..... Cmtd. 6-in. 1,515 ft.; top sand 1,535 ft; tested dry; W.O.; T.D 1,555 ft.
Rockmill et al's No. 1 Patrick, 330 ft. S, 330 ft. E, NW cor. NE NW Sec. 21-9-13 ..... S.D. 1,100 ft.
H. M. Self's No. 1 Paul, 330 ft. N and W, SE cor. NE SW Sec. 9-9-13 ..... Derrick.
Roshko & Labarre's No. 1 Maines, 427 ft. E, 114 ft. N, SW cor. SE NE Sec. 35-8-11 ..... S.D. 1,650 ft.
Sabine Prod. Co.'s No. 1 Whiting Corp., 150 ft. N and E, SW cor. Sec. 4-9-13 ..... Top marl 1,470 ft. and cmtd. 6-in.; drlg. 1,730 ft.; tested S.W., small show gas 2,154 ft; S.D. 2,207 ft
Skidmore & Mize's No. 1 Stoker, 440 ft. N, 225 ft. E, SW cor. SE NW Sec. 33-8-10 ..... Junked 1,600 ft; arranging for new hole.
Southland Drlg. Co.'s No. 1 Frost Lbr. Co., 330 ft. N and W, SE cor. NE NE Sec. 13-9-11 ..... Fishing D.S.; T.D. 2,475 ft.
Triangle Drlg. Co.'s No. 1 La. Long Leaf Lbr. Co., 330 ft. N and W, SE cor. Sec. 11-8-11 ..... S.D. 4,013 ft.
W. M. Ungerman's No. 1 F. Cross, 53 ft. S, 146 ft. W, NE cor. SW SE Sec. 25-8-11 ..... S.O.; arranging use acid test; T. D. 2,635 ft.
Zwolle Prod. Co.'s (was Baird Bros.) No. 1 Tatum, SW NE Sec. 25-8-12 ..... S.D. 2,360 ft.

TENSAS PARISH

H. V. Schumacker's No. 1 Curry, 1,320 ft. S, 1,320 ft. E, NW cor. Sec. 39-11-12 ..... Reaming 3,673 ft.

UNION PARISH

E. S. Goens et al's No. 1 Frost Lbr. Co., 330 ft. S and E, NW cor. Sec. 17-22-2e ..... Arranging D.S. test 3,092 ft.
W. D. Wingfield et al's No. 1 Union Sawmill Co., 330 ft. N and E, SW cor. Sec. 27-23-1e ..... S.D. 2,100 ft.

VERNON PARISH

Gibson & Johnson's (was Earl Jones') No. 1 Willis, 350 ft. N, 400 ft. E, SW cor. SE SE Sec. 32-3n-9w ..... S.D. 820 ft.
Llano Co-Op. Colony's No. 1 fee, SE cor. SE NE Sec. 6-1n-9 ..... Derrick pattern.

WEBSTER PARISH

J. E. Bundy's No. 1 Walker, 300 ft. S, 300 ft. W, NE cor. SE NW Sec. 11-18-10 ..... Derrick pattern.
Lyons, Neely & Clark's No. 1 Anderson Stovall, 600 ft. W, 150 ft. S, NE cor. NW SE Sec. 2-22-9 ..... Derrick.
R. E. Silvey et al's No. 1 Drake est., C NE NE Sec. 14-19-10 ..... Arranging deepen; T.D. 2,840 ft.

WEST CARROLL PARISH

Mamie S. McCurry's No. 1 Richard & Donnaw, 300 ft. N and E, SW cor. Sec. 13-19-9e ..... S.D. fuel 1,552 ft.

WINN PARISH

P.V.T. Oil Co.'s No. 1 Southern Paper Co., 150 ft. S and W, NE cor. SW Sec. 28-12-3 ..... S.D. for 8-in. csg. 1,050 ft.

Arkansas

CLEBURNE COUNTY

Frank S. Craver et al's No. 2 Doniphan Lbr. Co., 700 ft. N, 200 ft. E, SW cor. SW Sec. 34-11-9 ..... Cmtd. 8¼-in. 3,014 ft; S.D.; W.O. 3,750 ft.

CLEVELAND COUNTY

Crumm & Stillwell's No. 1 Dell, Sec. 10-10-12 ..... Rig up and S.D.

COLUMBIA COUNTY

Kendall Oil Co.'s No. 1 Fullenweider, 300 ft. S and E, NW cor. NE NE Sec. 13-17-22 ..... Cmtd. 6-in. 2,460 ft.; claim show oil and gas 2,530 ft.; bailed down 1,100 ft; bailing S.W. 2,520 ft.
Smith & Bilbury's (was Allen E. Smith, tr.'s) No. 1 J. M. Smith Est., 450 ft. N, 200 ft. E, SW cor. SE NW Sec. 5-16-18 ..... Rigging up.

HEMPSTEAD COUNTY

A. G. Bagnell's No. 1 Trottner & Rhinehart (was reported Rhinehart & Trottner's No. 1 C. H. Jones), 330 ft. N, 330 ft. E, SW cor. SW SW Sec. 2-13-28... Derrick.

JEFFERSON COUNTY

R. V. Harrell et al's No. 1 McGoughey NW cor. Sec. 32-7-10 ..... S.D.; W.O. 513 ft.

LAFAYETTE COUNTY

Chas. McDonald's No. 1 Allen, 400 ft. N and W, SE cor. SE SW Sec. 3-19-26 ..... Arranging cmt. 6-in; T.D. 3,267 ft.
Sam E. Wilson et al's No. 1 Red River Lbr. Co., SW SW Sec. 10-19-25 ..... Began drlg. Feb. 24; 10-in. 108 ft.

LINCOLN COUNTY

Lawrence M. Cook, tr.'s No. 1 McGhee Planting Co., 420 ft. S, 220 ft. W, NE cor. NE SW ..... Hole clean; washing to bottom; T.D. 4,020 ft.

LITTLE RIVER COUNTY

American Portland Cement Co.'s No. 1 fee, 150 ft. S and E, NW cor. SW NE Sec. 21-12-32 ..... S.D. 1,850 ft.
Howell & Green's No. 1 Taafe, Sec. 25-12-32 ..... O.W.D.D.; abd. Feb., 1931; T.D. 2,919 ft; arranging deepen.
M. E. Sanderson's No. 1 Hale, 1,200 ft. E, 800 ft. N, SW cor. SE SE Sec. 22-12-29 ..... S.D. 1,405 ft.

MILLER COUNTY

Baker & McMurray's No. 1 Andrew Rose, 150 ft. S and W, NE cor. NE NW Sec. 4-16-26 ..... Recmtd. 10-in. 210 ft.
Capt. E. Byrd's No. 1 Miller Land & Lbr. Co., 1,320 ft. N and W, SE cor. Sec. 29-18-27 ..... Rigging up.
Johnson & Burnham's (was John M. Burnham's) No. Duluth-Ark. Oil Co.'s No. 1 H. E. Beck, 150 ft. N, 170 ft. E, SW cor. NW SW Sec. 34-15-26 ..... S.D. 3,100 ft.
Duluth-Ark. Oil Co.'s No. 1 Price, NW cor. NE Sec. 18-16-25 ..... Cmtd. 10-in. 203 ft; cored sand and shale 2,815 ft.
Fitzwater et al's No. 1 C. J. Norsen, SW cor. SE SW Sec. 20-15-27 ..... S.D. 1,980 ft.
Fitzwater et al's No. 1 Fouke, 150 ft. S and W, NE cor. Sec. 11-17-27 ..... Cmtd. 12½-in. 105 ft; S.D.
Lee L. Foster's No. 1 Geo. Jones, 660 ft. N, 200 ft. W, SE cor. NW NW Sec. 29-16-26 ..... S.D. 1,240 ft.
J. T. Humphrey's No. 1 Grace, C SW SW Sec. 9-15-27.... Rigging up.
Jenkins Bros.' (was Roy Jenkins et al's) No. 1 B. F. Smith, 330 ft. W, 330 ft. N, SE cor. SE SE Sec. 32-15-26 ..... S.D. fuel 3,450 ft.
Jenkins Bros.' No. 2 Smith, 150 ft. S and W, NE cor. SE SE Sec. 32-15-26 ..... Location.
Jenkins Bros.' No. 3 Smith, 150 ft. S, 710 ft. W, NE cor. SE SE Sec. 32-15-16 ..... Location.
Jenkins Bros.' No. 4 Smith, 150 ft. S and E, NW cor. SE SE Sec. 32-15-26 ..... Location.
Magnolia Oil Co.'s No. 1 E. V. Olivet, 150 ft. S, 646 ft. E, NW cor. NE NE Sec. 4-16-26 ..... Arranging D.S. test 2,925 ft.
Molar Oil Club's No. 1 A. M. Gibson, NW cor. SW Sec. 30-18-27 ..... Derrick.
W. E. Noel et al's No. 1 Dickson hrs., 1,320 ft. W, 660 ft. S, NE cor. Sec. 11-20-27 ..... S.D., W.O. 2,600 ft.
Baker & McMurray's (was J. D. Reynolds') No. 1 E. L. Beck, 450 ft. E, 250 ft. N, SW cor. SW SE Sec. 35-15-26 ..... Derrick.
John C. Rogers' No. 1 Price, 330 ft. S, 400 ft. E NW cor. NW NW Sec. 17-16-26 ..... Rig up; S.D.
Simon & Birdwell's (was C. E. Starr's) No. 1 Barker, 330 ft. S, 150 ft. E, NW cor. NW SE Sec. 31-17-26... Began drlg. Jan. 23; 10-in. 197 ft.
Jule Alford's (was Sorrells & Tidwell's) No. 1 Roy McCowan, 660 ft. S and E, NW cor. NW SE Sec. 22-15-28 ..... S.D.; 4-ft. sand 3,747 ft.
Stephens, Byers & Sartain's No. 1 Lowe, 600 ft. S, 200 ft. E, NW cor. SE NW Sec. 14-16-27 ..... S.D.; new boiler 3,119 ft.

OUACHITA COUNTY

Chas. Steele et al's No. 1 Anderson, 155 ft. S, 150 ft. E, from center Sec. 36-12-18 ..... S.D. 1,140 ft.

PRAIRIE COUNTY

Powell Creek O. & G. Co.'s No. 1 Kloss, NE SW Sec. 3-4n-6w ..... Partly rigged up and S.D.

UNION COUNTY

J. G. Beard's No. 1 G. W. Dugall, 660 ft. S and E, NW cor. SW Sec. 13-19-13 ..... Derrick.
Graves, Ferguson & Fuller's No. 1 Patterson, SW cor. NE NE Sec. 31-19-16 ..... Began drlg. Dec. 23; cmtd. 10-in. 103 ft; S.D.
Helms et al's No. 1 Peggy Davis, Sec. 31-16-14 ..... Rig up.
Mamie McCurry et al's No. 1 Rowland, 300 ft. N and E, SW cor. Sec. 9-19-11 ..... Derrick.
Tom Nash's No. 1 Union Sawmill, 200 ft. N and E, SW cor. NW NE Sec. 19-18-11 ..... Moving in rig.
Wilson & Chapman's No. 1-A D. Norman, 330 ft. S and E, NW cor. N½ NE SE Sec. 3-18-13 ..... S.D. 1,678 ft.

WOODRUFF COUNTY

B. F. Thompson's No. 1 Rosser, 500 ft. N and E, SW cor. SE SE Sec. 7-5n-2w ..... S.D.; W.O. 1,530 ft.

YELL COUNTY
(Cable tools)

Rainbow Oil & Gas Co.'s No. 1 Barrett SE cor. NE NE Sec. 16-5n-24 ..... S.D. 278 ft.

East Texas

BOWIE COUNTY

Tom Bell et al's No. 1 Mars, 1,800 ft. N, 2,160 ft. W, NE cor. 465-ac. tract in O. D. Watson Sur. ..... S.D. 1,860 ft.
Lanford et al's No. 1 W. W. Whybark, 300 ft. S, 300 ft. W, SW cor. J. H. Dyer Sur. ..... S.D. 2,248 ft.

CASS COUNTY

Davis & Digg's (now Joiner Pet. Co.'s) No. 1 Roy Bryan, SW cor. Roy Bryan 88-ac. tr., Albert H. Latimer Sur. ..... S.D. 2,860 ft.
C. E. Murdock's No. 1 First National Bank, Evans Watson Sur. ..... S.D. 4,390 ft.
T. H. Pardoe, operator's No. 1 S. A. Orr, in the G. W. Morris Sur., 390 ft. east of the W line of the G. W. Morris Sur., also the east line of the David Frazier Sur. ..... Spudding.

HARRISON COUNTY

Great Eastern Oil Co.'s No. 1 Rudd, Wm. Steele Sur. .... S.D. repairs 1,293 ft.

MARION COUNTY

Baunoch Dev. Co.'s No. 1 Miller, 725 ft. N, 1,470 ft. E, SW cor. H. Fulgram Sur. (was Gist, Claunch & Dodson) ..... S.D.; W.O. 4,849 ft. in lime.
Dragon Oil Co.'s No. 1 R. W. Player, 330 ft. N and W, SE cor. 50-ac. tract in M. R. Noll Sur. ..... Cmtd. 6⅝-in. 2,382 ft; T.D. 2,419 ft.
Starling & Preston's No. 1 Henderson, R. Bennington Sur. H.B.S. ..... Drlg. shale 2,635 ft.

PANOLA COUNTY

Carter-Skidmore et al's No. 1 C. J. Wooten et al. 785 ft. N, 185 ft. E, SW cor. C. J. Wooten tract in P. Martin Sur. ..... Rig up.

J. L. Nelson et al's No. 1 J. Williams 300 ft. S, 700 ft. W, NE cor. Williams' 47-ac. tr., James Hanks Sur. ..... S.D.; W.O. 2,890 ft.; (C.D.).

Hampton Drlg. Co.'s No. 1 Lloyd Thompson, 320 ft. N, 350 ft. W, NW cor. C. Flanagan Sur. in Allen Leach Sur. ..... Rig up.

RED RIVER COUNTY

Ajo Oil Co.'s No. 1 Nichols & Daniels, center S 750 acres of 1,400-ac. tract in Hugh B. Shaw Sur. ..... Location.

Concord Oil Co.'s No. 1 Dillahunty, 500 ft. N, 300 ft. W, SE cor. Robt. Glass Sur. ..... Cmtd. 6⅝-in. 2,200 ft.

L. S. Priest et al's No. 1 R. W. Peck, 500 ft. W, 900 ft. N, most southerly SE cor. 220-ac. tract in Abram Wagley Sur. ..... S.D. 1,302 ft.

SHELBY COUNTY

J. H. Francis' (now Bob Chew et al's) No. 1 John Mims, Mary Smith Sur. ..... Cored lime and shale 3,481 ft.

General Minerals Co.'s No. 2 Pickering Lbr. Co., 600 ft. N, 400 ft. E. SW cor. D. S. Height Sur. ..... Arranging cmt. 6-in.; T.D. 4,416 ft.

Oil News' No. 1 Pickering, C. H. Patterson Sur. ..... Arranging set 5⅝-in. 3,220 ft.

Neil Lease & Oil Well Synd.'s No. 1 W. P. Harvey, NW cor. W. P. Harvey 120 ac. in W. P. Harvey Sur. ..... Derrick pattern.

Prairie Creek Crude Co.'s No. 1 Ellington, 150 ft. and 200 ft. W from SE cor. 42-ac. tr., J. Burleson Sur. ..... Recmtd. 4½-in. 3,335 ft; T.D. 3,422 ft.

Louisiana-Arkansas Proven Areas

North Louisiana

BOSSIER—BELLEVUE AREA

Company, well, farm name, section and block—	Remarks:
H. I. Morgan's No. 2 Smith, 1,520 ft. N, 660 ft. W, SE cor., Sec. 22-19-11	Hole clean; S.D. 3,969 ft.

CADDO—RODESSA AREA

United Gas Public Service Co.'s No. 1 Levee Board, 1,980 ft. N, 1,320 ft. E, SW cor. Sec. 27-23-16 ..... D.S. test 5,585 ft; est. 15,000,000 ft. gas; coring 5,601 ft.

CADDO—BLANCHARD AREA

Louana O. & G. Co.'s No. 1 Waskom, 660 ft. N and E, SW cor. Sec. 29-19-16 ..... Cored Nacatoch 943-51 ft; arranging D.S. test 951 ft.

Pyramid Oil Corp.'s No. 2 C. C. Wheeler, 660 ft. S, 350 ft. E, NW cor. Sec. 4-18-16 ..... Cmtd. 6-in. 2,750 ft.

CADDO—HOSSTON

Caddo Prairie O. & G. Co.'s No. 1 Hawkins, C SE SW Sec. 14-22-15 ..... Drlg. 1,820 ft.

Gibson Oil Co.'s No. 1 J. H. Dominick, 330 ft. S and W, NE cor. SW NE Sec. 31-23-14 ..... Began drlg. Feb. 26; 10-in. 126 ft.

Magnolia Pet. Co.'s No. 20 Doan-Thigpen, 660 ft. S, 470 ft. W NE cor. SE Sec. 6-20-15 ..... Top chalk 1,321 ft; bailed 18 bbls. oil 12 hrs. after acid.

Rice Bros.' No. 1 Evans, 747 ft. N, 150 ft. W, SE cor. NE NE Sec. 11-20-16 ..... Cmtd. 6-in. 1,312 ft; drilled plug.

The Texas Co.'s No. 20 D. H. Raines, 1,170 ft. E, 150 ft. N, SW cor. SE Sec. 16-21-15 ..... Derrick.

DE SOTO PARISH

Abernathy et al's No. 1 J. M. Nabors, 2,485 ft. E, 1,185 ft. N, SW cor. Sec. 32-13-11 ..... Arranging set csg. 2,550 ft.

SABINE PARISH—ZWOLLE

Alford & Avant's No. 1 J. J. Small, 124 ft. N, 420 ft. E, SW cor, NE NW Sec. 18-7-10 ..... Derrick.

J. B. Askew's No. 3 Henderson, 400 ft. S, 150 ft. E, NW cor. SW SE Sec. 31-8-10 ..... Derrick.

Baird Bros.' No. 3 Martinez, 1,013 ft. S, 907 ft. E, NW cor. NW SW Sec. 3-7-12 ..... S.D. 2,484 ft.

Byers et al's No. 1 Levin & Bishop, 550 ft. E, 450 ft. N, SW cor. Sec. 16-7-11 ..... O.W.D.D.; rigging up; T.D. 1,500 ft.

Cameron Oil Co.'s No. 1 G. Martinez, 845 ft. E, 540 ft. N, SW cor. Sec. 2-7-13 ..... Cmtd. 6-in. 2,022 ft; T.D. 2,064 ft.

T. B. Carpenter's No. 1 Cutrer, 330 ft. S and E, NW cor. SE Sec. 13-7-11 ..... Cmtd. 6-in. 2,546 ft.

Coming Oil Co.'s No. 1 T. L. Andrica, 415 ft. E, 365 ft. S, NW cor. NE SE Sec. 15-7-11 ..... Drlg. 2,275 ft.

Continental Drlg. Co.'s No. 1 Leone est., 70 ft. N, 200 ft. W, SE cor. Sec. 31-8-13 ..... Top marl, 2,210 ft; S.D. waiting for csg.

Crescent Drlg. Co.'s No. 1 Malbry, 660 ft. N and E, SW cor. SE NW Sec. 2-7-11 ..... Derrick.

Ed Deckard's No. 1 T. A. Webb, 150 ft. S and W, center Sec. 31-8-11 ..... Location (No. 1 drilled by A. D. King).

Edwards & Hubler's No. 1 G. Martinez, 510 ft. S, 280 ft. E, NW cor. SW SW Sec. 2-7-13 ..... Derrick.

Graham Prod. Co.'s No. 1 Lites, 330 ft. S and E, NW cor. SE SW Sec. 28-8-11 ..... Began drlg. Feb. 24; 10-in. 40 ft; drlg. 1,586 ft.

Graham Prod. Co.'s No. 1-B Lites, 330 ft. N and W, SE cor. SE SW Sec. 28-8-11 ..... Location.

V. R. Hammons et al's No. 1 Travis, 640 ft. N, 150 ft. E, SW cor. NW SE Sec. 13-7-11 ..... S.D. chalk, 2,610 ft.

D. D. Holcomb's No. 3 Quayhaglew, 149 ft. N, 300 ft. E, SW cor. SE SE Sec. 11-7-11 ..... W.O.S.R. 2,652 ft.

Investors Prod. Co.'s No. 1 S. J. Williams, 660 ft. E, 600 ft. S, NW cor. Sec. 24-7-11 ..... Drlg. chalk 2,775 ft.

H. M. Jones' No. 1 Raines, 300 ft. S, 150 ft. W, NE cor. NW NW Sec. 14-7-11 ..... Acid test 2,660 ft; 1,000 ft. oil in hole; W.O.S.R.

A. N. Landis' No. 1 La. Long Leaf Lbr. Co., 500 ft. S, 660 ft. W, NE cor. NE SW Sec. 29-8-10 ..... Cmtd. 6-in. top marl, 2,522 ft; T. D. 2,526 ft.

Lion Oil Ref. Co.'s No. 1 Trammell, 104 ft. N and E, SW cor. SE NE Sec. 30-8-11 ..... Cmtd. 6-in. top marl, 2,271 ft.; use acid; W.O. 2,585 ft.

Lowery & Green's No. 1 Adair, 330 ft. N and W, SE cor. SE SW Sec. 19-8-11 ..... Derrick.

Martin et al's No. 1 Porter, 330 ft. S, 330 ft. W, NE cor. NW SW Sec. 30-8-11 ..... Derrick.

L. K. McGuffin's No. 2 Chadick, 200 ft. S, 200 ft. W, NE cor. NW SW Sec. 32-8-10 ..... Location.

H. C. Moulding's No. 1 Brumley, 330 ft. N, 330 ft. E, SW cor. NW NW Sec. 2-7-11 ..... S.D. fuel 2,140 ft.

Nowlin & Cherry's No. 1 Turner, 100 ft. N, 330 ft. W, SE cor. Fractional NW NW Sec. 4-7-11 ..... Dry; arranging acid test 2,347 ft.

Pelican Nat. Gas Co.'s No. 20 La. Long Leaf Lbr. Co., 330 ft. S and W, NE cor. SE NE ..... Cmtd. 6-in. top marl, 2,316 ft.

H. L. Patton's No. 1 Ponder, 330 ft. N and W, C Sec. 15-7-11 ..... Top marl 2,376 ft; S.D.

Talbert & Perkins' (was Perkins & Babbin's) No. 1 Hopkins, 260 ft. S, 270 ft. W, NE cor. NE NW Sec. 11-7-11 ..... S.D.; W.O. 2,600 ft.

Picayune Oil Co.'s No. 1 Porter, 330 ft. N and W, SE cor. NW SW Sec. 30-8-11 ..... Top marl 2,372 ft; top chalk 2,388 ft; arranging 6-in. 2,395 ft.

Pugh-Hickman Drlg. Co.'s No. 3 Blackman, 330 ft. S and W, NE cor. NW NW Sec. 36-8-12 ..... Rigging up.

Sam Rigga, tr.'s No. 1 Darby, N half SE Sec. 21-7-11 ..... W.O. 2,556 ft.

Ritchey Prod. Co.'s No. 1 Stille, SE NW Sec. 36-8-12 ..... S.D.; repairs, 1,510 ft.

Robertson Drlg. Co.'s No. 1 J. W. Hughes, 1,320 ft. W, C, Sec. 36-8-12 ..... Began drlg. Feb. 15; cmtd. 10-in. 42 ft; drlg. 100 ft.

Rotary Oil Corp.'s No. 1 Hale, 330 ft. S and E, NW cor. SW Sec. 1-7-13 ..... Bailed dry; W.O. 2,440 ft.

C. T. Ruffin's No. 1 Lilly, 645 ft. S, 200 ft. W, NE cor. NW NW Sec. 8-7-11 ..... Bailed dry on acid test; arranging pump; T.D. 2,376 ft.

R. M. Self's No. 1 Newton, 330 ft. S and W, NE cor. NE SE Sec. 1-7-11 ..... Rig up.

Scully & Beach's No. 4 Lafitte, 225 ft. E, 197 ft. S, NW cor. SW NW Sec. 13-7-11 ..... Derrick.

Scully & Beach's No. 5 Lafitte, 413 ft. E, 190 ft. W, NE cor. SW NW Sec. 13-7-11 ..... Arranging swab through tubing 150 ft. in oil; T.D. 2,492 ft.

Service Drlg. & Royalties Corp.'s No. 2 Smith, Sec. 12-7-11 ..... Arranging second acid test; T.D. 2,814 ft.

Ben F. Smith's No. 4 Turner, NE cor. NE NW Sec. 4-7-11 ..... Drlg. 1,750 ft.

Simmons et al's No. 1 Fleming, E½ SE SE Sec. 11-8-13 ..... Rigging up.

Scully & Beach's No. 3 Lafitte, 1,030 ft. S, 134 ft. E, NW cor. Sec. 13-7-11 ..... Arranging deepen; T.D. 2,492 ft.

F. E. Stancil's No. 1 Pouder, 373 ft. S, 397 ft. E, NW cor. NE SE Sec. 19-7-11 ..... W.O.S.R. 2,593 ft.

State Prod. Co.'s No. 1 Keasele, 150 ft. N and W, SE cor. NW SW Sec. 2-7-13 ..... W.O.S.R. 2,427 ft.

State Prod. Co.'s No. 1 Lites, 150 ft. S and W, NE cor. SE SW Sec. 28-8-11 ..... Derrick.

State Prod. Co.'s No. 1 Sabine Lbr. Co., 345 ft. N, 100 ft. W, SE cor. NW SW Sec. 2-7-13 ..... S.D. 2,427 ft; 1,000 ft. oil; W.O.S.R. W.O.S.R.; 1,600 ft. oil in hole; T.D. 2,428 ft.

A. H. Tarvis' No. 1 Barthold & Steinhorst, 330 ft. N and E, SW cor. SW SW Sec. 25-8-12 ..... Derrick.

The Texas Co.'s No. 1 Ponder, 1,490 ft. S, 200 ft. W, NE cor. Sec. 16-7-11 ..... Bailed small S.O. 2,365 ft.; dry; arranging acid test 2,678 ft.

The Texas Co.'s No. 1 C. E. Cooper, 403 ft. S, 175 ft. E, NW cor. NE SE Sec. 30-8-11 ..... Cmtd. 6-in. top marl, 2,304 ft.; W.O.S.R.; 1,600 ft. oil in hole; T.D. 2,428 ft; pumped off; W.O. 2,428 ft.

The Texas Co.'s No. 6 Stille, 285 ft. S, 900 ft. E, NW cor. NW NW Sec. 33-8-11 ..... Cmtd. 6-in. top marl 2,206 ft; T. D. 2,222 ft; T.A. 2,600 ft.

B. R. White et al's No. 1 Cooper, 330 ft. S and E, NW cor. SW NW Sec. 32-8-11 ..... Derrick.

B. R. White et al's No. 1 Stille, 620 ft. W, 205 ft. N, SE cor. NE SW Sec. 35-8-13 ..... S.D. 1,205 ft.

Zwolle Prod. Co.'s No. 1 Tatum, 550 ft. E, 330 ft. N, C Sec. 25-8-13 ..... S.D. 2,360 ft.

Arkansas

OUACHITA COUNTY—SMACKOVER

L. L. McDonald's No. 1 J. A. Robertson, 200 ft. S and E, NW cor. NE NW Sec. 25-16-16 ..... Rigging up.

UNION COUNTY—EL DORADO

F. C. Henderson's No. 1 J. F. Sample, 330 ft. S and W, NE cor. NW NW ..... Derrick.

East Texas

PANOLA COUNTY

Daisy O. & G. Co.'s No. 1 Rucks, John Palmer Sur. ..... S.D. 3,359 ft.

Mississippi

HINDS COUNTY

Geo. P. Adkins et al's No. 1 Woodland Hills, 400 ft. N and W, SE cor. NW NE Sec. 26-6-1e ..... Derrick.

Ferguson-Fuller et al's No. 1 W. B. Montgomery, 610 ft. S, 600 ft. W, NE cor. NW NW Sec. 24-6-1e ..... Began drlg. Feb. 26; 12½-in. 35 ft.

RANKIN COUNTY

J. A. Baker et al's No. 3 Rankinside, 200 ft. E, 50 ft. N, SW cor. NE NW Sec. 6-5-2e ..... Rigging up.

Wildcat Operations in Mississippi

AMITE COUNTY

Company, well, farm name, section and block—	Remarks:
Magnolia State O. & G. Co.'s No. 1 Anderson, C NE NW Sec. 14-3n-3e	S.D. 400 ft.

CLARKE COUNTY

F. X. Gowans et al's No. 1 Effring, SE NE Sec. 13-1n-14e ..... S.D. 104 ft.

COVINGTON COUNTY

Eastman-Gardiner Interests' No. 1 E. B. Pickering, S½ NE NW Sec. 19-8-15 ..... Began drlg. Feb. 22; 12½-in. 45 ft.

GEORGE COUNTY

Pelican Oil & Gasoline Co.'s No. 1 Luce Packing Co., SW, Sec. 25-15-6 ..... Derrick.

HINDS COUNTY

Lionel Pet. Co.'s No. 1 J. L. Gaddis, 1,980 ft. E, 1,400 ft. S, NW cor. Sec. 7-7-3w ..... Rigging up.

National Gas Co. of Miss.' No. 1 M. C. Halder, 160 ft. E, 660 ft. N, SW cor. Sec. 16-4n-1e ..... S.D. for csg. 810 ft.

JACKSON COUNTY

Gulf Ref. Co. of La.'s No. 1 Danciger, 2,440 ft. S, 1,120 ft. W, NE cor. Sec. 27-4s-8w ..... Began Dec. 6; core drlg.

LAMAR COUNTY

Chas. W. Gorr et al's No. 1 Jordan, NW cor. SW Sec. 1-2s-15w ..... Derrick.

Stauffer & Kouri's No. 1 Bond, SE NE Sec. 18-2n-14w ..... Hole clean; arranging 6⅝-in. 3,026 ft; T.D. 3,030 ft.

MONROE COUNTY

P. J. McAlpine's No. 1 Rye, Sec. 32-15s-17w ..... Waiting on 6-in. for test; T.D. 2,709 ft.

NEWTON COUNTY

Bob Dalton's No. 1 Majure, 400 ft. N, 300 ft. E, SW cor. SE Sec. 25-4n-11e ..... Drlg. 2,600 ft.

RANKIN COUNTY

Home Oil Prod. Corp.'s No. 1 So. Jackson Land Co., 35 ft. S, 130 ft. W, NE cor. NW SW Sec. 23-5n-1e ..... S.W. and abd 2,500 ft.

Love Pet. Co.'s No. 3 Int. Lbr. Co., 460 ft. S and E, NW cor. Sec. 28-4n-2e ..... Chalk 2,963 ft.; S.D.

Majestic O. & G. Co.'s No. 1 Elton Lbr. Co., Sec. 10-4n-3e ..... Derrick.

SCOTT COUNTY

M. U. Culley et al's No. 1 Owens, Sec. 3-8-9 ..... S.D. 750 ft.

SUNFLOWER COUNTY

Miss. O. & G. Dev. Co.'s No. 1 Dockery, SE SW Sec. 21-22-4 ..... Began drlg. Feb. 21.

WEBSTER COUNTY

P. J. McAlpine's No. 1 Hensley, Sec. 15-21-11 ..... Cored Tuscaloosa 1,800 ft; S.D.

WILKINSON COUNTY

Foster Creek Oil Co.'s No. 1 Foster Creek Lbr. Co., Sec. 13-3n-2w ..... Drlg. sandy shale 2,100 ft.

Wildcat Operations in Alabama

BALDWIN COUNTY

(Cable tools)

Company, well, farm name, section and block—	Remarks:
H. H. Givens' No. 1 Ashman, Sec. 10-4-5e	Waiting on 6-in.; T.D. 1,393 ft. in sand.

CULLMAN COUNTY

C. V. Corey's No. 1 King, NE cor. NE NW Sec. 35-3-4w ..... S.D. 710 ft.

LAMAR COUNTY

De Soto O. & G. Co.'s No. 1 Gardner, NW NW Sec. 32-15s-16w ..... S.D.; shale 2,300 ft.

WASHINGTON COUNTY

South Ala. O. & G. Co.'s No. 1 Wilson, Sec. 26-1n-1w ..... S.D. in sand 2,959 ft.

Gulf Coast Fields and Wildcats

(Continued from Page 50)

The Texas Co.'s No. 1 Davis, 250 ft. S 42 deg. W and 400 ft. N 48 deg. W out of E cor. of Lot 31, H. N. Little Sur. ..... Derrick.
The Texas Co.'s No. 1 Natali, 300 ft. S 42 deg. W and 300 ft. N 48 deg. W out of E cor. of Lot 43, Div. E, Suburban Garcens Subd., H. N. Little Sur. ..... Spudded.

WEST COLUMBIA—BRAZORIA COUNTY

The Texas Co.'s No. 12 Abrams (W.O.) ..... Drlg. sand 3,239 ft.

BARBERS HILL—CHAMBERS COUNTY

Humble O. & R. Co.'s No. 2 Kirby, Henry Griffith League, 100 ft. W of E line of lease and 200 ft. N of No. 1 ..... Drlg. salt 2,113 ft.
Mills Bennett Prod. Co.'s No. 2-C Gulf fee, Wm. Bloodgood Sur., 175 ft. N of No. 1 ..... Drlg. salt 3,446 ft.
Sinclair Prairie Oil Co.'s No. 2 Smith (W.O.), W. D. Smith Sur., 30 ft. from N line, 50 ft. from E line of 30-ac. tract ..... T.D. 6,903 ft; abd.
Sinclair Prairie Oil Co.'s No. 14 Wilburn, Henry Griffith League, 150 ft. W of No. 12 ..... Coring sandy shale 4,068 ft.
Sun Oil Co.'s No. 16 Wilburn, Henry Griffith League, 150 ft. W of No. 14 and 50 ft. N of S line ..... Rig.
The Texas Co.'s No. 3 Lawrence fee, Henry Griffith League, 740 ft. W of E line in center of tract..... Set 25 ft. 10 in. of 4¾-in. screen 4,720 ft.; swbd. S.W.; pulling screen.
The Texas Co.'s No. 9 Wilburn, Henry Griffith League, 580 ft. E of NW cor. and 50 ft. S of N line ..... Salt 2,035 ft; cmtd. cavity; D.S. stuck.
Yount Lee Oil Co.'s No. 20 Chambers County, Wm. Bloodgood Sur., 150 ft. N of No. 2 and 50 ft. E of W line ..... Drlg. shale 4,475 ft.
Yount Lee Oil Co.'s No. 21 Chambers County, Wm. Bloodgood Sur., 175 ft. N of No. 20 and 50 ft. E of W line ..... Drlg. salt 3,040 ft.
Yount Lee Oil Co.'s No. 1 John Schilling, Wm. Bloodgood Sur., 50 ft. W of E line, 139.2 ft. S of N line of tract ..... Derrick.

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 17 Mayes, F. H. R. Wallis Sur., 400 ft. NE of No. 14 ..... Blc'g. road to location.

RABBS RIDGE—FORT BEND COUNTY

Gulf Prod. Co.'s No. 2-A Gubbels, Samuel Kennedy Sur., 503 ft. S, 423 ft. E of NW cor. of 52-ac. tract .... Drlg. shale 3,392 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 11-A F. I. Booth, Samuel Kennedy Sur., 6,108 ft. E along N line of J. Rabb Sur., from NW cor. of E½ of survey and 467 ft. N at right angles ..... Drlg. shale 3,639 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 4-A George, J. Rabb Sur. ..... Comp. 50 bbls. per hr., 5,365 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 11-A Lockwood & Sharp, J. Rabb Sur. ..... Location.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 13-A Lockwood & Sharp, J. Rabb Sur., 4,174 ft. E, 522 ft. S of NW cor. of lease ..... Shale and boulders 1,210 ft.; setting up new rig.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 14-A Lockwood & Sharp, J. Rabb Sur., 4,173 ft. from W line. 526 ft. from S line of lease ..... Location.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 15-A Lockwood & Sharp, J. Rabb Sur. ..... Drlg. shale 4,963 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 12-B Lockwood & Sharp, J. Rabb Sur., 1,729 ft. from E line, 1,129 ft. from S line of "B" lease ..... Derrick.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 13-B Lockwood & Sharp, J. Rabb Sur., 5,382 ft. from W line, 526 ft. from S line of "B" lease ..... Drlg. shale 3,387 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 14-B Lockwood & Sharp, J. Rabb Sur., 500 ft. from E line and 302 ft. from S line ..... Location.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 1 R. A. and O. H. Woltera, Robt. Peebles Sur., 325 ft. S and 500 ft. W of NE cor. of 1,000-ac. tract ..... Derrick.
Humble O. & R. Co.'s No. 5 Gubbels, Samuel Kennedy Sur., 1,460 ft. N, 1,476 ft. W of SE cor. of 100-ac. tract ..... Drlg. shale 4,976 ft.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 35 Moore, Mark Smith Sur. ..... Rig.

SUGARLAND—FORT BEND COUNTY

Kolmm Prod. Co.'s No. 1 Peterson, Wm. Littel Sur., 100 ft. SE, 100 ft. SW of NE cor. of tract ..... Sand and shale 3,756 ft; standing.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 3 Broussard, M. Dunman Sur., 150 ft. E of center of W line of tract ..... Drlg. shale and lime 5,455 ft.
Yount Lee Oil Co.'s No. 33 Cade, N. Fitzsimmons Sur., 3,505 ft. from N line, 1,615 ft. from E line ..... Drlg. shale 5,350 ft.
Yount Lee Oil Co.'s No. 34 Cade, N. Fitzsimmons Sur., 856 ft. S of No. 33 ..... Drlg. shale and lime 4,510 ft.
Yount Lee Oil Co.'s No. 14 Smith, Martin Duman Sur., 900 ft. W of No. 12 ..... Drlg. shale 4,875 ft.

ARIOLA—HARDIN COUNTY

Houston Oil Co.'s No. 1-Y Ariola fee, 5,610 ft. from W line, 5,610 ft. from N line of Ariola Sur. ..... Abd. in shale 6,246 ft.
Republic Prod. Co.'s No. 3 Ariola fee, Ariola Sur., 400 ft. S of No. 1 ..... Location.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 93 Jordit, Jordit Sur., 200 ft. W of No. 20 ..... Drlg. shale 983 ft.

HUMBLE—HARRIS COUNTY

Sun Oil Co.'s No. 66 River, Robert Dunman Sur., 1,722 ft. from S line, 284 ft. from E line of lease ..... Cored oil sand 1,164 ft.
Sun Oil Co.'s No. 68 River, Robt. Dunman Sur., 1,471 ft. from S line, 284 ft. from W line of lease ..... Abd. 1,437 ft.

MYKAWA—HARRIS COUNTY

Crown-Framer Oil Co.'s No. 4 Minntex, 165 ft. S, 120 ft. W of NE cor. of Blk. 193, Wm. Lovett Sur. ..... Tested dry 4,912 ft.

PIERCE JUNCTION—HARRIS COUNTY

Rio Bravo Oil Co.'s No. 14-A Settegast (W.O.), J. Kopman Sur. ..... T.D. 5,379 ft; milled out 5,314 ft.; sidetracked to 5,365 ft; set 23 ft. of 4¾-in. screen; swbng.
Rio Bravo Oil Co.'s No. 24-A Settegast, J. Kopman Sur., 1,310 ft. from N line, 750 ft. from E line of "A" lease ..... Set 37 ft. of 4¾-in. screen 5,750 ft.; swbng.
Saxet Oil Co.'s No. 3 Herman (W.O.), J. Kopman Sur. No. 44 ..... No report.
Bryan Ward's No. 1 Mowery, 300 ft. from W line, 62 ft. from S line of J. Hamilton Sur. No. 53 ..... T.D. 1,537 ft.

FANNETT—JEFFERSON COUNTY

Lowrie & Young's No. 1 Junker, Wm. Smith Sur., 125 ft. N, 100 ft. E of Gulf Prod. Co.'s No. 1 Junker in 360-ac. tract ..... No report.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Co.'s No. 1 Davis (W.O.), David L. Kokernot Sur., 50 ft. from S and E lines of survey.. No report.
Cranfill-Reynolds Co.'s No. 10 Moore's Bluff, M. Duncan Sur., 1,500 ft. from E line, 2,100 ft. from N line of 632-ac. tract ..... No report.

HULL—LIBERTY COUNTY

Aberoil Oil Co.'s No. 1 Barrow, Jesse Devore Sur., 64 ft. from N line, 700 ft. from E line of 10-ac. tract.. Coring sand and shale 6,350 ft.
Carpenter & Parr's No. 2 Antilley, Jesse Devore Sur., 821 ft. W, 250 ft. S of NE cor. of 20-ac. lease .... Derrick.
Eclipse Oil Co.'s No. 1 Gordon, Jesse Devore Sur., 50 ft. out of NE cor. of Empire 13-ac. lease ..... Derrick.

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Hannah Oil Co.'s No. 1 Hannah, Jesse Devore Sur., 100 ft. W of The Texas Co.'s No. 1 Hannah.....Standing 3,665 ft.
Houston Prod. Co.'s No. 2 Baldwin, Jesse Devore Sur., 50 ft. from S line, 50 ft. from E line of lease .....Derrick.
Houston Prod. Co.'s No. 15 Barngrover (W.O.), Jesse Devore Sur. .....T.D. 4,001 ft; sidetracking at 3,-350 ft.

Lynd & Rowe's No. 1 Noble & Lynd, Jesse Devore Sur., 137 ft. out of SE cor. of 5-ac. tract .....Standing 3,564 ft.
Porter & Baggett's No. 1 Baggett, Jesse Devore Sur., 80 ft. from W line, 80 ft. from S line of 171-ac. tract .....S.D. 3,071 ft.
Republic Prod. Co.'s No. 149 Dolbear, Jesse Devore Sur., 250 ft. W of No. 6 .....T.D. 2,497 ft. in salt; plugged to 1,700 ft. and sidetracked at 950 ft; drlg sand and shale 1,695 ft.

D. L. Thibodeaux' No. 2 Taylor, Jesse Devore Sur., 100 ft. N of No. 1 .....Derrick.
Unique Oil Co.'s No. 1 Knox-Nelson-Layton, Jesse Devore Sur., 20 ft. from N line and midway E and W of ½-ac. tract .....Drlg. 4,850 ft.

CONROE—MONTGOMERY COUNTY

Alpha Oil Co.'s No. 1 T. S. Falvey, 466 ft. from S and E lines of G. Harris Sur. .....Drlg. shale 825 ft.
Alpha Oil Co.'s No. 2 Keystone Mills, Lemuel Smith Sur., 466 ft. from S and E lines of 200-ac. tract....No report.
Alpha Oil Co.'s No. 3 Keystone Mills, Lemuel Smith Sur., 1,492 ft. from S line, 466 ft. from W line of tract .....Spudded.
Alpha Oil Co.'s No. 2-A Krohn, S. H. Bryan, 550 ft. from E line, 1,186 ft. from S line .....Sand 5,098 ft; cmtd. 7-in. csg.
Alpha Oil Co.'s No. 3-A Krohn, S. H. Bryan Sur., 791 ft. N of No. 2-A .....Location.
Alpha Oil Co.'s No. 4-A Krohn, S. H. Bryan Sur., 791 ft. N of No. 3-A .....Location.
Alpha Oil Co.'s No. 5-A P. G. Krohn, S. H. Bryan Sur., 395 ft. from N line, 550 ft. from E line of lease Location.
Alpha Oil Co.'s No. 1-C South Tex. Dev. Co., T.&N.O. Sur. No. 12, 460 ft. from N line, 350 ft. from W line of 40 acres .....Shale 5,133 ft; cmtd. csg.
Amerada Pet. Corp.'s No. 3 South Tex. Dev. Co., 908 ft. from W line, 1,005 ft. from S line of C. A. West Sur. .....Comp. 90 bbls. per hr.; ½-in. choke, 5,133 ft.

Amerada Pet. Corp.'s No. 4 South Tex. Dev. Co., C. A. West Sur., 466 ft. from E line, 330 ft. from S line of lease .....Rig.
Bishop Oil Corp.'s No. 1 Rhoden, 466 ft. from E line in center N and S of 25.8-ac. tract .....Location.
Bishop Oil Corp.'s No. 1 Rhoden, 466 ft. from W line in center N and S of 25.8-ac. tract .....Location.
Bishop Oil Co.'s No. 1 Smith & Ratcliff, W. F. Rhodes Sur., 466 ft. out of SE cor. of lease .....Comp. 90 bbls. per hr.; 5,146 ft.
Bishop Oil Co.'s No. 1 South Tex. Dev. Co., T.&N.O. Sur. No. 5, 574 ft. from N line, 379 ft. from W line of 20-ac. tract .....Derrick.
J. H. Coker's No. 1 McDonald, center Sec. 13, W.C.R.R. Sur. .....Location.
H. M. Crighton's No. 1-A South Tex. Dev. Co., center of 16-ac. lease in T.&N.O. Sur. No. 5 .....Location.
Farrin Oil Co.'s No. 1 R. Thompson, center of 10-ac. lease (Lots 55 and 58), C. A. West Sur. .....Location.
Feitex Oil Co.'s No. 2 Keystone Mills, Lemuel Smith Sur., 1,041 ft. W of No. 1, in center of tract N and S...Derrick.
Feitex Oil Co.'s No. 2 Kirby-Bertrand, Wagers Sur., 1,267 ft. S of No. 1, in center of tract E and W....Derrick.
John Gassell's No. 1 E. A. Walker, C. T. Darby Sur., center of 12-ac. tract .....Drlg. shale 565 ft.
Gulf Coast Drlg. & Prod. Co.'s No. 1 Hensley, 486 ft. from W line, 466 ft. from S line of A. Steele Sur. ...Derrick.
Gulf Coast Drlg. & Prod. Co.'s No. 2 Hensley, 466 ft. from N line, 466 ft. from W line, A. Steele Sur. ..Location.
Gulf Coast Drlg. & Prod. Co.'s No. 6 Keystone Mills, 466 ft. out of most westerly NW cor. of A. S. James Sur. .....Drlg. sticky shale 1,285 ft.
Gulf Coast Drlg. & Prod. Co.'s No. 7 Keystone Mills, 466 ft. from N and W lines of A. S. James Sur. ..Location.
Gulf Coast Drlg. & Prod. Co.'s No. 1-A Keystone Mills, Steele Sur., 1,368 ft. from W line of lease and 382 ft. from N line of survey .....Drlg. shale 4,957 ft.
Gulf Coast Drlg. & Prod. Co.'s No. 2-A Keystone Mills, A. Steele Sur., 382 ft. from N line, 434 ft. from W line .....Location.
Hamill & Smith's No. 1 South Tex. Dev. Co., center of 5-ac. tract in T.&N.O. Sur. No. 5 .....Drlg. shale 4,946 ft.
Hamilton, Hill & Hill's No. 2 L. P. Gilbert, John Davis Sur., 323 ft. from W line of 38.7-ac. tract in center N and S .....Drlg. shale 2,526 ft.
Harrison & Abercrombie's No. 4 Alexander, John McHorse Sur., 356 ft. from E line, 436 ft. from S line of lease .....Location.
Harrison & Abercrombie's No. 6 Alexander, John McHorse Sur., 466 ft. from W line, 300 ft. from S line of lease .....Location.
Harrison & Abercrombie's No. 1 W. B. Massey, 466 ft. from S and W lines of John Massey Sur. .....Drlg. shale 3,823 ft.
Harrison & Abercrombie's No. 1 Ben Wiggins, M. T. Wiggins Sur., 403 ft. from E line and 207 ft. from S line of 29-ac. tract .....Comp. 75 bbls. per hr.; ⅛-in. choke, 5,105 ft.

Hooper-Rutherford Oil Co.'s No. 4 Hooper, L&G.N. Sur., Abst. 649, 415 ft. from S line, 570 ft. from W line of lease .....Location.
Hooper-Rutherford Oil Co.'s No. 5 Hooper, L&G.N. Sur., No. 649, center of tract E and W and due E offset Houston-Tidal's No. 1 Hooper .....Sand 5,020 ft; cmtd. csg.
Houston Oil Co.-Tide Water Oil Co.'s No. 4 Cartwright, John Davis Sur., 332 ft. from E line, 799 ft. from N line of lease .....Derrick.
Houston Oil Co.-Tide Water Oil Co.'s No. 6 Cartwright, John Davis Sur., 982 ft. E of No. 5 and 466 ft. from S line of lease .....Coring shale 5,122 ft.
Houston Oil Co.-Tide Water Oil Co.'s No. 5 Hamman, C. B. Stewart Sur., 466 ft. from S and E line of lease .....Sand 5,106 ft; cmtd. csg.
Houston Oil Co.-Tide Water Oil Co.'s No. 3 W. N. Hooper, Jr., L&G.N. Sur. No. 11, 667 ft. S of No. 1 in center of tract E and W .....Derrick.
Houston Oil Co.-Tide Water Oil Co.'s No. 1 Moore, Lemuel Smith Sur., 336 ft. from the N line, 650 ft. from the E line of the 100-ac. lease .....Derrick.
Houston Oil Co.-Tide Water Oil Co.'s No. 2 Moore, Lemuel Smith Sur., 350 ft. from N line, 456 ft. from W line of the 100-ac. lease .....Location.
Humble O. & R. Co.'s No. 1-F Alexander, 333 ft. from E line, 586 ft. from S line of John McHorse Sur....Drlg. shale 1,303 ft.
Humble O. & R. Co.'s No. 8-A Cartwright, J. Davis Sur., 933 ft. NE of No. 8 .....Location.
Humble O. & R. Co.'s No. 10-A Cartwright, John Davis Sur., 933 ft. E of No. 4 .....Comp. flowing 101 bbls. per hr.; ⅛-in. choke, 5,186 ft.

Humble O. & R. Co.'s No. 11-A Cartwright, John Davis Sur., 466 ft. from N line, 2,448 ft. from W line of lease .....Drlg. shale 1,215 ft.
Humble O. & R. Co.'s No. 8-C Cartwright, J. Davis Sur., 1,375 ft. from E line, 466 ft. from S line of lease .....Location.
Humble O. & R. Co.'s No. 1 P. Collins, 466 ft. out of NE cor. of 75-ac. tract, Lemuel Smith Sur. .....Comp. 100 bbls. per hr.; ⅛-in. choke, 5,149 ft.

Humble O. & R. Co.'s No. 7 Dobbins, 452 ft. from N line, 1,514 ft. from W line of Ransom House Sur. .. Drlg. shale 3,005 ft.
Humble O. & R. Co.'s No. 8 Dobbins, Ransom House Sur., 1,054 ft. E of No. 7 .....Location.
Humble O. & R. Co.'s No. 9 Dobbins, 425 ft. from N line of tract, 3,610 ft. from W line of Ransom House Sur. .....Location.
Humble O. & R. Co.'s No. 3 Emory, 1,211 ft. from W line, 547 ft. from S line of W.C.R.R. Sur. No. 13....Drlg. shale 3,668 ft.
Humble O. & R. Co.'s No. 4 Emory, W.C.R.R. Sur. No. 13, 500 ft. N of No. 3 .....Location.
Humble O. & R. Co.'s No. 5 Emory, W.C.R.R. Sur., 466 ft. from N line, 442 ft. from W line .....Location.
Humble O. & R. Co.'s No. 6 Emory, W.C.C.R.R. Sur. No. 13, 496 ft. SE of No. 5 and 496 ft. NE of No. 4 ...Location.
Humble O. & R. Co.'s No. 3-B Hirsch, 1,211 ft. from W line and 547 ft. from N line of D. McIntyre Sur...Comp. 106 bbls. per hr.; ½-in. choke, 5,149 ft.

Humble O. & R. Co.'s No. 4-B Hirsch, D. McIntyre Sur., 933 ft. S of No. 3 .....Drlg. shale 1,287 ft.
Humble O. & R. Co.'s No. 1 R. E. Jones, Lemuel Smith Sur., 800 ft. from E line, 350 ft. from N line of lease. Sand 5,065 ft; cmtd. csg.
Humble O. & R. Co.'s No. 2 R. E. Jones (91 acres), 466 ft. from N line and 2,206 ft. from E line of Lemuel Smith .....Drlg. sand 731 ft.
Humble O. & R. Co.'s No. 3 Madeley, Ransom House Sur., S offset Hooper Rutherford Oil Co.'s No. 8 Madeley .....Comp. flowing 86 bbls. per hr.; ½-in. choke, 5,156 ft.

Humble O. & R. Co.'s No. 9 Madeley, 171 ft. from N line and 451 ft. from W line of Ransom House Sur.. Comp. 95 bbls. per hr.; ½-in. choke, 5,161 ft.

Humble O. & R. Co.'s No. 11 Madeley, Ransom House Sur., 1,398 ft. S of N line and 466 ft. W of E line....Standing 1,005 ft.
Humble O. & R. Co.'s No. 12 Madeley, Ransom House Sur., 800 ft. from N line and 1,310 ft. from W line of tract .....Location.
Humble O & R. Co.'s No. 13 Madeley, Ransom House Sur., 1,100 ft. SE of No. 6 .....Location.
Humble O. & R. Co.'s No. 15 Madeley, Ransom House Sur., 975 ft. SW of No. 7 .....Location.
Humble O. & R. Co.'s No. 28 Madeley, Ransom House Sur., 466 ft. S of N line, west offset Standard No. 1 Madeley .....T.D. 490 ft; hole cratered; moved rig off.

Humble O. & R. Co.'s No. 30 Madeley, Ransom House Sur., 1,709 ft. NW of No. 31 .....Location.
Humble O. & R. Co.'s No. 31 Madeley, 466 ft. from S line, 466 ft. from W line of Ransom House Sur. ....Sand 5,070 ft; cmtd. csg.
Humble O. & R. Co.'s No. 32 Madeley, 452 ft. N of center of S line of Ransom House Sur. .....Location.
Humble O. & R. Co.'s No. 33 Madeley, Ransom House Sur., 1,044 ft. E of No. 32 .....Location.
Humble O. & R. Co.'s No. 34 Madeley, Ransom House Sur., 1,221 ft. NE of No. 7 .....Coring shale 5,084 ft.
Humble O. & R. Co.'s No. 35 Madeley, 480 ft. from E line, 425 ft. from S line of Ransom House Sur. ....Location.
Humble O. & R. Co.'s No. 2 McComb, Lemuel Smith Sur., 800 ft. from W line and 255 ft. from N line of lease .....T.D. 5,140 ft; W.O.

Humble O. & R. Co.'s No. 3 L. B. McComb, Lemuel Smith Sur., 1,329 ft. from E line, 466 ft. from S line..Drlg. shale 1,156 ft.
Humble O. & R. Co.'s No. 4 L. B. McComb, L. Smith Sur., 1,134 ft. NW, 873 ft. NE at right angles out of SW cor. of tract .....Location.
Humble O. & R. Co.'s No. 5 L. B. McComb, Lemuel Smith Sur., 650 ft. from N line, 1,200 ft. from W line .....Location.
Humble O. & R. Co.'s No. 6 L. B. McComb, Lemuel Smith Sur., 466 ft. from S line, 500 ft. from W line..Location.
Humble O. & R. Co.'s No. 1 T. B. McComb, Lemuel Smith Sur., 466 ft. out of NW cor. of lease .....Drlg. lime 3,867 ft.
Humble O. & R. Co.'s No. 2 T. B. McComb, Lemuel Smith Sur., 466 ft. out of SW cor. of lease .....Location.
Humble O. & R. Co.'s No. 4 T. B. McComb, L. Smith Sur., 1,100 ft. from S line, 650 ft. from E line .....Location.
Humble O. & R. Co.'s No. 6 Moore, 3,617 ft. from E line, 467 ft. from S line of Lemuel Smith Sur. .....Location.
Humble O. & R. Co.'s No. 9 Moore, Lemuel Smith Sur., 933 ft. N of No. 6 .....Drlg. shale 4,916 ft.
Humble O. & R. Co.'s No. 10 Moore, Lemuel Smith Sur., 933 ft. N of No. 6 .....Shale 5,030 ft; cmtd. csg.
Humble O. & R. Co.'s No. 11 Moore, Lemuel Smith Sur., 933 ft. N of No. 7 .....Cmtd. surface csg. 1,333 ft.
Humble O. & R. Co.'s No. 13 Moore, Lemuel Smith Sur., 933 ft. SE of No. 4 .....Comp. 102 bbls. per hr.; ⅛-in. choke, 5,135 ft.

Humble O. & R. Co.'s No. 15 Moore, Lemuel Smith Sur., 933 ft. NW of No. 7 .....Comp. 111 bbls. per hr.; ⅛-in. choke 5,136 ft.

Humble O. & R. Co.'s No. 17 Moore, Lemuel Smith Sur., 933 ft. NW of No. 15 .....Location.
Humble O. & R. Co.'s No. 18 Moore, Lemuel Smith Sur., 933 ft. NW of No. 8 .....Location.
Humble O. & R. Co.'s No. 19 Moore, Lemuel Smith Sur., 933 ft. NW of No. 1 .....Location.
Humble O. & R. Co.'s No. 21 Moore, Lemuel Smith Sur., 933 ft. SW of No. 9 .....Location.
Humble O. & R. Co.'s No. 22 Moore, Lemuel Smith Sur., 933 ft. SW of No. 21 .....Location.
Humble O. & R. Co.'s No. 23 Moore, 466 ft. S of center of N line of Lemuel Smith Sur. .....Location.
Humble O. & R. Co.'s No. 27 Moore, 466 ft. from S and E lines of Lemuel Smith Sur. .....Drlg. shale 4,885 ft.
Humble O. & R. Co.'s No. 2 Ezra Moorehead, 466 ft. E and 466 ft. S from most southerly NW cor. of L. A. Lang Sur. .....T.D. 2,961 ft; pumping wtr. in hole.

Humble O. & R. Co.'s No. 3 Plaefflin, 950 ft. from N line, 664 ft. from W line of W. M. Real Sur. .....Drlg. shale 1,280 ft.
Humble O. & R. Co.'s No. 4 Plaefflin, 653 ft. S of No. 3, W. M. Real Sur. .....Location.
Humble O. & R. Co.'s No. 5 Plaefflin, W. M. Real Sur., 664 ft. S of No. 4 .....Location.
Humble O. & R. Co.'s No. 1 L. B. Rooker, 403 ft. E. of center of W line of J. M. Real Sur. .....Drlg. sand 2,937 ft.
Humble O. & R. Co.'s No. 4 L. B. Rooker, 466 ft. from W line, 503 ft. from S line of J. M. Real Sur. .....Sand and shale 5,120 ft; cmtd. csg.
Humble O. & R. Co.'s No. 28 South Tex. Dev. Co., 1,-450 ft. from S line, 900 ft. from W line of T. C. Howell Sur. .....Location.
Humble O. & R. Co.'s No. 29 South Tex. Dev. Co., 1,-900 ft. from S line, 1,300 ft. from E line of T. C. Howell Sur. .....Location.
Humble O. & R. Co.'s No. 32 South Tex. Dev. Co., 1,-300 ft. from S line, 4,800 ft. from E line of Theo. Slade Sur. .....Location.
Humble O. & R. Co.'s No. 33 South Tex. Dev. Co., 1,-300 ft. from S line, 4,000 ft. from E line of Theo. Slade Sur. .....Rig.
Humble O. & R. Co.'s No. 34 South Tex. Dev. Co., Theo. Slade Sur., 933 ft. NE of No. 33 .....Location.
Humble O. & R. Co.'s No. 35 South Tex. Dev. Co., Theo. Slade Sur., 1,095 ft. NE of No. 34 .....Location.
Humble O. & R. Co.'s No. 36 South Tex. Dev. Co., Theo. Slade Sur., 1,010 ft. NE of No. 35 .....Location.
Humble O. & R. Co.'s No. 37 South Tex. Dev. Co., Theo. Slade Sur., 933 ft. NE of No. 36 .....Location.
Humble O. & R. Co.'s No. 41 South Tex. Dev. Co., Theo. Slade Sur., 933 ft. S of No. 34 .....Location.

Humble O. & R. Co.'s No. 42 South Tex. Dev. Co., Theo. Slade Sur., 1,114 ft. NE of No. 43	Comp. flowing 90 bbls. per hr.; ½-in. choke, 5,170 ft.
Humble O. & R. Co.'s No. 43 South Tex. Dev. Co., Theo. Slade Sur., 933 ft. NE of No. 31	Sand 5,151 ft; cmtd. csg.
Humble O. & R. Co.'s No. 44 South Tex. Dev. Co., 664 ft. W of center of E line of Theo. Slade Sur.	Drlg. sand 407 ft.
Humble O. & R. Co.'s No. 45 South Tex. Dev. Co., Theo. Slade Sur., 1,424 ft. N of No. 15	Location.
Humble O. & R. Co.'s No. 46 South Tex. Dev. Co., Theo. Slade Sur., 760 ft. NE of No. 15	Location.
Humble O. & R. Co.'s No. 6-B South Tex. Dev. Co., 442 ft. from W line, 323 ft. from S line of C. T. Darby Sur.	Location.
Humble O. & R. Co.'s No. 7-B South Tex. Dev. Co., C. T. Darby Sur., 296 ft. from N line, 443 ft. from E line of lease	Location.
Humble O. & R. Co.'s No. 2 Mrs. L. Wiggins, Lemuel Smith Sur., 577 ft. from N line and 375 ft. from E line of tract	Comp. 82 bbls. per hr.; ½-in. choke, 5,142 ft.
Humble O. & R. Co.'s No. 2 Williams, Lemuel Smith Sur., 253 ft. from N line and 600 ft. from W line of 46-ac. tract	Sand 5,050 ft; cmtd. csg.
W. M. Massey's No. 2 Fannie Hooper, 1,030 ft. from N line, 635 ft. from W line of Fannie Hooper (De-Moss) Sur.	Derrick.
McAlbert Oil Co.'s No. 1 Keystone Mills, A. Steele Sur., 433½ ft. S of N line of lease in center of tract E and W	Sand 5,040 ft; cmtd. csg.
McAlbert Oil Co.'s No. 2 Keystone Mills, 433 ft. from S line, 434 ft. from W line of A. Steele Sur.	Location.
J. R. Meeker's No. 1 Fannie Hooper, J. W. Watson Sur., center of 20-ac. tract	Sand 5,077 ft; cmtd. csg.
Mortex Oil Co.'s No. 1 South Tex. Dev. Co., T.&N.O. Sur. No. 13, 850 ft. from W line, 150 ft. from N line of tract	Comp. 75 bbls. per hr., 5,032 ft.
M. J. Munn's No. 1 South Tex. Dev. Co., 150 ft. from E line, 140 ft. from S line of Lot 114, Clark Beach Sur.	Drlg. shale 5,285 ft.
Navarro Oil Co.'s No. 1 Brown, 466 ft. out of NW cor. of E. P. Brown Sur.	Drlg. shale 885 ft.
Neuhaus & Horn's No. 1 South Tex. Dev. Co., center of L. L. Horn 16.31-ac. tract in T.&N.O. Sur. No. 5	Cmtd. surface csg. 1,327 ft.
Neversuch Oil Co.'s No. 2 South Tex. Dev. Co., T.&N.O. Sur. No. 5, 922 ft. N of No. 1, in center of tract E and W	Coring shale 5,070 ft.
North Star Oil Co.'s No. 1 Crestwood, T.&N.O. Sur. 15, 466 ft. from S and W line of 77-ac. tract	Location.
Republic Prod. Co.'s No. 1 B. D. Griffin, Wilson Strickland Sur., 283 ft. from E line, 466 ft. from N line of lease	Rig.
Showers & Moncrief's No. 3 Dunn, Wilson Strickland Sur., 900 ft. S of No. 1	No report.
Skelly Oil Co.-Conroe Oil Co.'s No. 2 South Tex. Dev. Co., T.&N.O. Sur. No. 5, 467 ft. from N line of 32-ac. tract in center E and W	Sand 5,125 ft.
Southern Drlg. Co.'s No. 1 South Tex. Dev. Co., T.&N. O. Sur. No. 5, center of 5-ac. tract	Comp. 45 bbls. per hr.; ⅝-in. choke, 5,120 ft.
Southland Oil Co.'s No. 4 Cummings, Wilson Strickland Sur.	Cmtd. 7-in. csg. 4,971 ft.
Southland Oil Co.'s No. 5 Cummings, Wilson Strickland Sur., 766 ft. from E line, 284 ft. from S line of lease	Location.
Standard Oil Co. of Kans.' No. 3 Madeley, Ransom House Sur., 430 ft. from E line and 466 ft. from S line of lease	Drlg. shale 4,625 ft.
Standard Oil Co. of Kans.' No. 3 Smith & Ratcliff, W. S. Rhodes Sur., 466 ft. from N and W lines of lease	Drlg. shale 1,476 ft.
Standard Oil Co. of Kans.' No. 4 Smith & Ratcliffe, W. S. Rhodes Sur., 503 ft. along E line of Rhodes Sur. from SW cor. of Humble's Rooker lease and west 466 ft. at right angles	Sand 5,120 ft; cmtd. csg.
Standard Oil Co. of Kans.' No. 5 Smith & Ratcliffe, W. S. Rhodes Sur., 466 ft. out of SW cor. of lease	Comp. 90 bbls. per hr., 5,123 ft.
Steinberger, Brown & Wheeler's No. 2 South Tex. Dev. Co., T.&N.O. Sur. No. 5, 450 ft. from S line in center E and W of 20-ac. tract in 40-ac. lease	Drlg. sand 4,042 ft.
Steinberger, Brown & Wheeler's No. 3 South Tex. Dev. Co., T.&N.O. Sur. No. 5, center of NE 10 acres of 50-ac. tract	Cmtd. surface csg. 1,362 ft.
Strake Pet., Inc.'s No. 1 Keystone Mills, Lemuel Smith Sur., 1,300 ft. southward along W line of Alpha 200-ac. lease from NW cor. and 466 ft. W at right angles	T.D. 5,121 ft; plugged to 5,103 ft; comp. 125 bbls. per hr.; ½-in. choke, 5,103 ft.
Sun Oil Co.'s No. 1 Jones, Sitton Sur., 466 ft. out of NW cor. of tract	Rig.
Sun Oil Co.'s No. 1 Keystone Mills, 466 ft. from N and E lines of John Bricker Sur.	Sand 5,040 ft.
Sun Oil Co.'s No. 1 South Tex. Dev. Co., T.&N.O. Sur., No. 5, 467 ft. from S line in center E and W of 30-ac. tract	Cmtd. surface csg. 1,343 ft.
Sun Oil Co.'s No. 2 South Tex. Dev. Co., T.&N.O. Sur. No. 5, 943 ft. N of No. 1 in center of lease E and W	Cmtd. surface csg. 1,295 ft.
Sun Oil Co.'s No. 1 W. S. Stewart, 466 ft. from S and E lines of J. M. Real Sur.	Set screen 5,133 ft.
Sun Oil Co.'s No. 3 Stewart, J. M. Real Sur., 1,040 ft. from E line, 700 ft. from N line of lease	Spudded.
The Texas Co.'s No. 2 Dudley, C. B. Stewart Sur., 466 ft. from S and E lines of lease	Drlg. gumbo and lime 3,950 ft.
The Texas Co.'s No. 10 Moody, 2,030 ft. from E line, 600 ft. from S line of Ransom House Sur.	Drlg. hard limey shale 1,187 ft.
The Texas Co.'s No. 12 Moody, Ransom House Sur., 932 ft. S of No. 8	Location.
The Texas Co.'s No. 13 Moody, 2,130 ft. from E line, 466 ft. from S line of Ransom House Sur.	Sandy shale 5,043 ft; cmtd. 7-in. csg. 5,031 ft.
The Texas Co.'s No. 15 Moody, Ransom House Sur., 966 ft. N of No. 14	Location.
The Texas Co.'s No. 17 Moody, Ransom House Sur., 320 ft. NW of No. 16	Location.
The Texas Co.'s No. 18 Moody, N 60 deg. E 2,919 ft. and N 30 deg. W 253 ft. from SW cor. Ransom House Sur.	Comp. 100 bbls. per hr.; ⅝-in. choke 5,125 ft.
The Texas Co.'s No. 19 Moody, 1,682 ft. NE along SE line of Ransom House Sur. from SW cor. and 466 ft. NW at right angles	Sticky shale 5,045 ft; cmtd. 7-in. csg. 5,033 ft.
The Texas Co.'s No. 20 Moody, 2,200 ft. E along S line of Wilson Strickland Subd. from SW cor. and 466 ft. S at right angles	Location.
The Texas Co.'s No. 22 Moody, Ransom House, 350 ft. from most westerly west cor. and 466 ft. from most southerly N line of lease	Location.
The Texas Co.'s No. 2 Rhodes, 979 ft. 15 deg. W. 466 ft. N 75 deg. E of SW cor. of W. S. Rhodes Sur.	Drlg. gumbo and lime 2,508 ft.
The Texas Co.'s No. 5 W. S. Rhodes, 466 ft. S of SW cor. of C. T. Darby Sur., and 350 ft. at right angles in W. S. Rhodes Sur.	Drlg. sandy shale 1,984 ft.
The Texas Co.'s No. 7 Rhodes, 1,210 ft. from E line of lease and 330 ft. S of S line of C. A. West Sur. in W. S. Rhodes Sur.	Location.
The Texas Co.'s No. 8 Rhodes, 330 ft. S of S line of C. A. West Sur., and 330 ft. W of W line of John Massey Sur. in W. S. Rhodes Sur.	Location.

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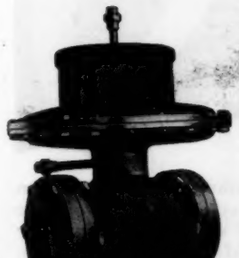

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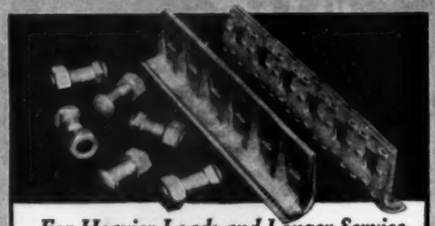

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The Texas Co.'s No. 9 Rhodes, W. R. Rhodes Sur., 1,290 ft. from N line and 466 ft. from E line ..... Drlg. sandy shale 4,343 ft.
The Texas Co.'s No. 11 Rhodes, 466 ft. from S line, 1,398 ft. from E line of W. S. Rhodes Sur. ..... Drlg. gumbo 2,167 ft.
The Texas Co.'s No. 12 Rhodes, W. S. Rhodes Sur., 1,286 ft. from W line, 600 ft. from S line ..... Derrick.
The Texas Co.'s No. 13 Rhodes, 1,450 ft. from S line, 1,300 ft. from E line of lease, W. S. Rhodes Sur. ... Location.
The Texas Co.'s No. 14 Rhodes, W. S. Rhodes Sur., 1,060 ft. from W line, 1,470 ft. from S line ..... Location.
Harvey Thornton's No. 1 John Rhodes, Ransom House Sur., center of 3.29-ac. tract ..... Cmtd. surface csg. 1,397 ft; standing.

Tide Water Oil Co.-Strake's No. 1 Dean, W. C. C. Lynch Sur., 370 ft. S of N line of survey and 2,489 ft. from W line of lease ..... Comp. 100 bbls. per hr.; ½-in. choke, 5,097 ft.

Tide Water Oil Co.-Strake's No. 2 Dean, W. C. C. Lynch Sur., 2,351 ft. S along W line of survey from SW cor. of E. P. Brown Sur. and thence 467 ft. E at right angles ..... Drlg. shale 5,005 ft.
Tide Water Oil Co.-Strake's No. 3 Dean, W. C. C. Lynch Sur., 467 ft. from W line, 1,540 ft. from N line of lease ..... Drlg. shale 5,002 ft.
Tide Water Oil Co.-Strake's No. 4 Dean, W. C. C. Lynch Sur., 467 ft. from S and E lines of lease .... Location.
Tide Water Oil Co.'s No. 2 Freeman, John Davis Sur., 1,384 ft. from S line, 332 ft. from W line of 36 acres .. Comp. 60 bbls. per hr.; ½-in. choke, 5,137 ft.

Tide Water Oil Co.'s No. 1 J. R. Eichletz, Lemuel Smith Sur., 2,147 ft. from E line and 225 ft. from S line of 100-ac. tract ..... Derrick.
Tide Water Oil Co.'s No. 2 J. R. Eichletz, Lemuel Smith Sur., 310 ft. from E line and 596 ft. from S line of 100-ac. tract ..... Location.
Tide Water Oil Co.'s No. 1 Granger, 467 ft. from N and W lines, T&N.O. Sur. No. 14 ..... Drlg. shale 960 ft.
Tide Water Oil Co.'s No. 1 P. G. Krohn, S. H. Bryan Sur., 467 ft. from N and E lines of lease ..... Drlg. shale 4,352 ft.
Tide Water Oil Co.'s No. 2 P. G. Krohn, S. H. Bryan Sur., 2,150 ft. from N line, 467 ft. from E line of lease ..... Drlg. shale 3,845 ft.
Tide Water Oil Co.'s No. 13 Lewis, C. B. Stewart Sur., 2,175 ft. from N line and 467 ft. from E line of lease Sand 5,100 ft; cmtd. 7-in. csg.
Tide Water Oil Co.'s No. 14 Lewis, C. B. Stewart Sur., 1,883 ft. from N line and 467 ft. from E line of lease. Drlg. rock 820 ft.
Tide Water Oil Co.'s No. 15 Lewis, C. B. Stewart Sur., 2,761 ft. from N line and 467 ft. from W line of lease Comp. 105 bbls. per hr.; ½-in. choke, 5,123 ft.

Tide Water Oil Co.'s No. 16 Lewis, C. B. Stewart Sur., 467 ft. from S and W lines of lease ..... Rig.
Tide Water Oil Co.'s No. 17 Lewis, C. B. Stewart Sur., 1,570 ft. from W line, 467 ft. from S line of lease. .. Digging pits.
Tide Water Oil Co.'s No. 18 Lewis, C. B. Stewart Sur., 396 ft. from S line, 1,163 ft. from E line of tract .. Location.
Tide Water Oil Co.'s No. 19 Lewis, C. B. Stewart Sur., 395 ft. from S line, 2,180 ft. from E line of lease .... Location.
Tide Water Oil Co.'s No. 20 Lewis, 1,493 ft. from S line, 467 ft. from E line of lease ..... Location.
Tide Water Oil Co.-Republic Prod. Co.'s No. 3 South Tex. Dev. Co., T.&N.O. Sur. 15, 380 ft. from E line, 466 ft. from N line of lease ..... Comp. 90 bbls. per hr.; ½-in. choke, 5,117 ft.

Tide Water Oil Co.-Republic Prod. Co.'s No. 4 South Tex Dev. Co., 467 ft. from N line, 467 ft. from W line of T.&N.O. Sur. No. 5 ..... Drlg. shale 4,875 ft.
Tide Water Oil Co.-Republic Prod. Co.'s No. 5 South Tex. Dev. Co., T.&N.O. Sur. No. 5, 1,459 ft. from W line and 467 ft. from N line of lease..... Location.
Tide Water Oil Co.-Republic Prod. Co.'s No. 6 South Tex. Dev. Co., T.&N.O. Sur. No. 5, 2,379 ft. from S line, 380 ft. from E line ..... Location.
Tide Water Oil Co.'s No. 7 South Tex. Dev. Co., T.&N. O. Sur. No. 5, 3,173 ft. from S line, 380 ft. from E line ..... Location.

PORT NECHES—ORANGE COUNTY

The Texas Co.'s No. 4 Stark, 675 ft. E. 340 ft. N of SW cor Marshall Beauchamp Sur. ..... Drlg. shale 4,344 ft.

CLAY CREEK—WASHINGTON COUNTY

Clay Creek Oil Co.'s No. 2 Bimage, J. F. Perry Sur., 1,800 ft. from S line, 150 ft. from E line of survey. S.D. 1,354 ft; waiting heavier rig.
Sun Oil Co.'s No. 6 Clay, J. F. Perry Sur., 300 ft. N of No. 5 ..... Drlg. sandy lime 1,753 ft.

REFUGIO—REFUGIO COUNTY

United Prod. Co.'s No. 1-A M. F. Lambert, 666 ft. from N line, 322 ft. from W line of Herrs & Brown Sur... Drlg. gumbo 1,100 ft.

SOUTH LOUISIANA FIELDS

JENNINGS—ACADIA PARISH

Olympic Oil Co.'s No. 1 Luckett, 1,150 ft. S, 75 ft. W of NE cor. Sec. 42-9s-3w ..... S.D. 2,122 ft.

DARROW—ASCENSION PARISH

Rio Bravo Oil Co.'s No. 2 Community, Sec. 31-10s-2e, 1,760 ft. S, 600 ft. W of No. 1 ..... Coring sand 4,756 ft.
Rio Bravo Oil Co.'s No. 1 Gumbel, 4,000 ft. W, 250 ft. S of NE cor. of S. Gumbel & Co. tract, Sec. 32-10s-2e... T.D. 4,996 ft; cmtd. 9⅝-in. csg. 4,930 ft; rebuilding derrick.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 23 United Land Co., Sec. 15-10s-4e, 200 ft. N and 90 ft. W of No. 3 ..... Shale 1,936 ft; cmtd. csg.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Magnolia Pet. Co.'s No. 3 Waite, 330 ft. out of NE cor. SE Sec. 12-9s-7w ..... Drlg. wtr. sand 5,615 ft.
Shell Pet. Corp.'s No. 3 Heyd, 365 ft. N, 330 ft. W of SE cor. NE Sec. 13-9s-7w ..... Drlg. shale and lime 4,511 ft.
Shell Pet. Corp.'s No. 1 Stafford, 325 ft. S, 225 ft. E of NW cor. Sec. 18-9s-6w ..... Sand showing oil 5,376-77 ft; to test.

EDGERLY—CALCASIEU PARISH

C. O. Noble, tr.'s No. 6 Hunter (W.O.), Sec. 21-9s-11w.. Coring sand 3,682 ft.

LOCKPORT—CALCASIEU PARISH

Lockport Oil Co.'s No. 1 Phoenix ..... D.S. stuck 1,200 ft; standing.
Magnolia Pet. Co.'s No. 9 Faquahar, 200 ft. N, 150 ft. E of SW cor. NE SE Sec. 3-10s-9w ..... Tested dry 4,857 ft; deepened to 4,859 ft; resetting screen.
Magnolia Pet. Co.'s No. 33 Miller, Sec. 9-10s-9w, 200 ft. S and 485 ft. E of NW cor. of lease ..... Sand 2,960 ft; cmtd. 9⅝-in. csg. 2,944 ft.
Union Sulphur Co.'s No. 5 Martha Moss, Sec. 8-10s-9w (location to come) ..... Location.

STARKS—CALCASIEU PARISH

Union Sulphur Co.'s No. 1 Lutcher-Moore, 2,200 ft. W, 1,010 ft N of SE cor. Sec. 10-9s-12w ..... Cap rock 1,378 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 771 fee (D.D.), 431 ft. S and 340 ft. W of center of Sec. 29-9s-10w ..... Tested S.W. 5,156 ft; standing.
Union Sulphur Co.'s No. 777 fee, 753 ft. E and 756 ft. N of center Sec. 29-9s-10w ..... Drlg. shale 2,227 ft.
Union Sulphur Co.'s No. 778 fee, 362 ft. N, 1,755 ft. W of center Sec. 29-9s-10w ..... Drlg. rock 2,101 ft.

VINTON—CALCASIEU PARISH

Marrs McLean's No. 15 F. H. Gray, Sec. 32-10s-12w..... Rigging.
Vinton Pet. Co.'s No. 22 Vincent, 685 ft. N, 620 ft. E of SW cor. Sec. 34-10s-12w, in Lot 116 ..... Standing 2,655 ft.
Wilson-Broach's No. 9 Wilson, Sec. 33-10s-12w, 200 ft. N of No. 8 and 25 ft. E of W line of Strip 7 ..... Temp. S.D. 4,262 ft.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 3 Mulvey, Sec. 34-11s-1w, 1,515 ft. from N line, 1,150 ft. from E line of tract ..... Sandy shale showing oil 4,823 ft; reaming to make D.S. test.

Pure Oil Co.'s No. 3 Mulvey, 600 ft. S, 2,369 ft. E of NW cor. Sec. 34-11s-1w ..... Drlg. gumbo 1,108 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 1 Hanszen, 300 ft. W and 30 ft. N of SE cor. SW SE Sec. 11-12s-10w ..... Drlg. 5,170 ft.

Calcasieu Oil Co.'s No. 40 Watkins, Sec. 24-12s-10w, 262 ft. S of No. 36 ..... Fishing 2,926 ft.

Gulf Ref. Co.'s (Jim Oil Co.'s) No. 11 Irwin, Sec. 13-12s-10w, 500 ft. N, 78 ft. W of No. 6 ..... No report.

Massert & Cruse's No. 1 J. B. Duhon, 656 ft. S, 325 ft. E of NW cor. Sec. 26-12s-10w ..... Drlg. 3,150 ft.

The Texas Co.'s No. 10-B State, 1,000 ft. E, 300 ft. N of NE cor. Sec. 13-12s-10w ..... Shale 5,600 ft.

The Texas Co.'s No. 11-B State, 1,000 ft. E, 600 ft. N of NE cor. Sec. 13-12s-10w ..... Location.

Yount Lee Oil Co.'s No. 13 School land, Sec. 16-12s-10w, 100 ft. N, 100 ft. W of No. 10 ..... Drlg. gumbo 1,200 ft.

PORT BARRE—ST. LANDRY PARISH

The Texas Co.'s No. 13 Botney Bay, Sec. 4-6s-5e, 185 ft. W of E line of lease and direct offset Gulf's No. 2 Wilson-Cockran ..... No report.

The Texas Co.'s No. 14 Botney Bay, Sec. 4-6s-5e, 274 ft. W of most southerly NE cor. of 562-ac. tract. ..... Comp. flowing 1,450 bbls. daily; ⅝-in. choke, 400 lbs. pressure, 3,237 ft.

CHOCTAW—IBERVILLE PARISH

Standard Oil Co.'s No. 3 Gay, 520 ft. S, 200 ft. E of center Sec. 52-9s-11e ..... Drlg. 4,605 ft.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 6 Wilbert, 1,052 ft. N, 152 ft. W, out of SE cor. Lot 2, Sec. 9-11s-12e ..... Salt 5,490-6,170 ft; S.D.

CAMERON MEADOWS—CAMERON PARISH

Magnolia Pet. Co.'s No. 3 Cameron Meadows, 3,620 ft. S, 1,900 ft. W of NE cor. Sec. 21-14s-13w ..... Drlg. hard sand 5,581 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 11 Yount Lee, Sec. 12-13s-8w, 800 ft. S 66 deg. 42 min. from No. 9 ..... Drlg. tough sticky shale 6,385 ft.

TEXAS

MISCELLANEOUS WILDCATS

AUSTIN COUNTY

Cranfill-Reynolds Co.'s No. 1 J. B. Lewis, 3,150 ft. from N line, 320 ft. from W line of J. C. Hacienda Sur... Drlg. sandy shale 2,506 ft.

Great Southern Oil Co.'s No. 1 Schevojsa, 329 ft. N, 78 deg. E of N cor. B. Dottery Sur. ..... T.A. 3,500 ft.

BRAZORIA COUNTY

Amerada Pet. Corp. and Rycade Oil Corp.'s No. 3 Seaburn, 1,250 ft. E of W line and 4,550 ft. S of N line of Austin & Williams Sur. ..... Drlg. hard sand and lime 2,579 ft.

Danciger O. & R. Co.'s No. 2 Hunt, Pledger, 4,550 ft. from E line, 5,550 ft. from S line of W. Carson Sur. Location.

Tri-fin Oil Co.'s No. 1 Moers, 1,635 ft. SW of Chocolate Bayou, 493 ft. SE of NW line of F. Moore Sur. ..... Drlg. hard shale 3,706 ft.

BRAZOS COUNTY

Adkins & O'Neill's No. 1 Clay, 1,150 ft. E, 5,750 ft. N of SW cor. of Walter Southerland Sur. ..... Cmtd. csg. 120 ft.

COLORADO COUNTY

Danciger O. & G. Co. and L. E. Hults' No. 1 C. L. Raver, B.B.B.&C. Sur., Sec. 1, 990 ft. out of SW cor. of 477-ac. tract ..... Derrick.

Fabrigus & Poole's No. 1 Lake Side Irrigation, 1,500 ft. SE, 500 ft. NE of NW cor. of Patrick Reel Sur.. Rig.

Humble O. & R. Co.'s No. 1 John McShane, L&G.N. Sur., Sec. 42, 466 ft. out of NE cor of tract ..... Sand showing gas 3,859 ft; to make D.S. test.

Pilot Oil Co.'s No. 1 Tate, Cooke & DeWeese Sur., 150 ft NE. 50 ft. NW of S cor. of survey ..... Drlg. broken sandy shale 3,956 ft.

Plymouth Oil Co.'s No. 1 Ream, 330 ft. out of NE cor. of I.&G.N. Sur. No. 47 ..... Derrick.

FORT BEND COUNTY

John Deering and Benedum & Trees' No. 1 Westenfeld, 900 ft. E of W line, 310 ft. N of S line of M. Escalera Sur. ..... Abd. 6,225 ft.

Lowrie & Young's No. 1 Jackson Brown, Pilant Lake, Wm. Barrett & Abner Harris Sur., 152 ft. E, 158 ft. N out of SE cor. Humble 182-ac. Brown lease in D. Hale 548-ac. tract ..... Sticky shale 5,830 ft; S.D.

Naylor & DeCosta's No. 1 Naylor, 6,350 ft. N, 55 deg. E from SW cor. 653-ac. tract in Christman Sur. .... T.D. 7,014 ft; preparing to resume operations.

GALVESTON COUNTY

Humble O. & R. Co.'s No. 1 Rosenkrans, Green's Bayou, center N½ of Lot 10, Sarah White Sur. ..... Heaving shale 7,101 ft; standing.

HARRIS COUNTY

Mills Bennett Prod. Co.'s No. 1 G. H. Kleppie, March Sur., 400 ft. from N line, 330 ft. from W line of 24-ac. tract and survey ..... Dry and abd. 6,017 ft.

D.P.M. Corp.'s No. 1 Malcomson, A. Schouten Sur., 500 ft. from N line, 1,800 ft. from E line of 283-acre Daniels tract ..... Derrick.

H. B. Jordan's No. 1 Cochran, J. L. Jordan Sur., 1,950 ft. from S line, 1,930 ft. from E line ..... Rig.

Weatherall Prod. Co.'s No. 1 Pacen, 1,320 ft. from N line, 1,320 ft. from W line of Brock Sur. ..... Location.

JACKSON COUNTY

The Texas Co.'s No. 1 Mitchell, S. F. Austin League, 450 ft. W, 450 ft. S of NE cor. of 63-ac. tract, Lot 28, Clement Subd. ..... Location.

JASPER COUNTY

Smitherman, Neilson & Noble's No. 1 Cameron, Wm. Jones Sur., 400 ft. S 45 deg. W of SW cor. of J. W. Allen 300-ac. tract ..... Shale 3,410 ft.

JEFFERSON COUNTY

Carroll & Miller's No. 1 C. A. Mashman, W. B. Dyches Sur., 462 ft. W of highway and 105 ft. S of NE line of 13-ac. tract ..... Spudded and S.D.

Coastal Oil Co.'s No. 1 Young, 250 ft. from E line, 160 ft. from S line of 40-ac. tract, in Blk. F-5, Lot 6, Joseph Grigsby Sur. ..... S.D. 3,950 ft.

MADISON COUNTY

G. C. Foster's No. 1 Poteet, J. S. Hunter Sur., 350 ft. from most southerly N line, 150 ft. from most westerly W line of 287¾-ac. tract ..... No report.

MATAGORDA COUNTY

Cockburn Oil Corp.'s No. 5 Hawkins, Shepherds Mott, 2,200 ft. SE, 1,800 ft. NE of W cor. Daniel McCarthy Sur. ..... T.D. 5,320 ft; plugged to 2,150 ft; sidetracking 3,225 ft.

E. E. Comb's No. 1 Wadsworth, 3,350 ft. from S line, 2,750 ft. from W line of upper S. R. Fisher Sur. .... S.D. 1,100 ft.

Dr. Griffith et al's No. 3 Baer, Big Hill, 5,000 ft. N, 3,000 ft. E from SW cor. of Seth Ingram Sur. ..... Standing 2,730 ft.

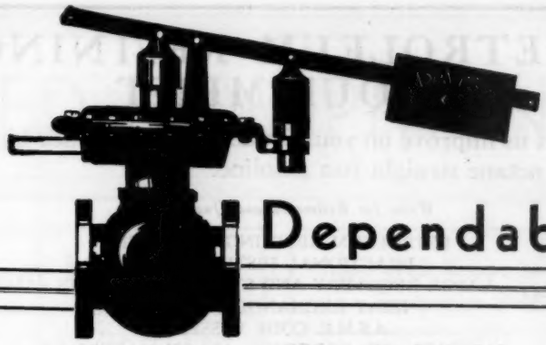
R. L. Sprinkle et al's No. 1 Turner, 4,900 ft. from NE line, 3,800 ft. from SE line of M. Cummings Sur. ... Rig.

United North & South Dev. Co.'s No. 1 Stoddard (W.O.), 150 ft. W, 545 ft. N of SE cor. of Blk. 53, Buckeye townsite ..... T.D. 7,926 ft; P.B. to sidetrack.

United North & South Dev. Co.'s No. 2 Stoddard, 25 ft. each way out of NW cor. of Lot 19, Buckeye Townsite ..... Drlg. gumbo 1,620 ft.

United North & South Dev. Co.'s No. 1 St. L. & B. M. "Y," 200 ft. S of main line of RR and 200 ft. NE of SW fork of "Y" in townsite, J. C. Keller Sur. ... Set 108 ft. of 5-in. screen 7,858 ft; comp. flowing 80 bbls. per hr.; ½-in. choke, 525 lbs. pressure.

United North & South Dev. Co.'s No. 1 Dr. Plotner, 1,210 ft. SE of No. 1 Stoddard and 126 ft. W of right of way of Collegeport branch of St.L.&B.M. R.R., Buckeye ..... Location.



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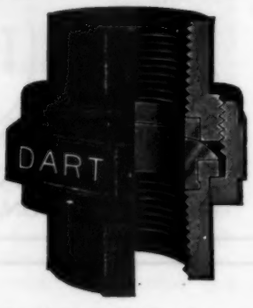

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The Oil and Gas Journal
TULSA, OKLAHOMA

MONTGOMERY COUNTY

C. J. Daniels' No. 1 A. H. Salia, Wm. Barker Sur., 330 ft. from E line, 400 ft. from N line of W 36 acres of Salia tract ..... S.D. 1,620 ft.
Mound Creek Oil Co.'s No. 1 Sealey, 1,751 ft. E and 5,088 ft. N, from SW cor. of M. Cartwright Sur. in John Sealey Sur. ..... Abd. in S.W. sand 5,010 ft.
A. H. Parsons et al's No. 2 Drought, Kronknite Sur., 3,000 ft. N, 100 ft. E of NW cor. of A. B. Hill 46⅓ acres ..... S.D. 3,900 ft.
C. C. Steinberger's No. 1 F. B. Smith, R. Rogers Sur., 466 ft. from S and E lines of S 150 acres of 214.8-ac. tract ..... Spudded and S.D.
Sutton-Hawkins' No. 1 Foster, Hosea de la Garza Sur., 3,333 ft. N, 1,320 ft. E of NE cor. of W. J. Johnson 100-ac. tract ..... S.D. 4,287 ft.

POLK COUNTY

Anderson et al's No. 1 Duke, Peter J. Manard Sur., 330 ft. out of NW cor. of 235-ac. tract ..... S.D. 4,725 ft.
Carlisle & Williams' No. 1 G. McDonald, A. Viesca Sur., Sec. 5, 150 ft. N, 230 ft. E of 110-ac. tract ..... Rigging.
Koch & Stevens' No. 1 Ruth Lawrence, Castallian Sur., 300 ft. from W line, 790 ft. from S line of 54-ac. tract ..... S.D. 2,633 ft.
Roxie Oil Co.'s No. 1 Reed, A. Viesca Sur., 150 ft. out of NW cor. of 479-ac. lease ..... Spudded.
Toner & Purdy's No. 1 Martha Roberts, Joaquin T. De Rumayor Sur. ..... Coring sandy shale 6,155 ft.

REFUGIO COUNTY

Gulf Prod. Co.'s No. 2 J. O'Connor (W.O.), C.E.P.I.&M. Co. Sur. No. 40, 1,200 varas from S line, 1,500 varas from E line of tract ..... Sticky shale 6,779 ft.
Gulf Prod. Co.'s No. 3 O'Connor, C.E.P.I.&M. Co. Sur., No. 133, 6,236 ft. SW along SE line from NE cor. of John O'Connor land, thence 1,639 ft. NW at right angles ..... Derrick.
Humble O. & R. Co.'s No. 3 O'Connor, Florentine Rice Sur., 13,757 ft. from S line at right angles, 3,412 ft. from E line at right angles of 5,545-ac. ranch ..... T.D. 6,821 ft; plugged to 2,918 ft.
Geo. M. Smith's No. 1 J. M. O'Brien, 450 ft. W of center of E line of Winfield Sur. ..... Rig.

SAN JACINTO COUNTY

Weaver et al's No. 1 Delta Land & Timber Co., 1,400 ft. NE of SW line of James W. Robertson Sur., and 800 ft. at right angles ..... No report.

TRINITY COUNTY

C. M. Beckner's No. 1 Gibson, Wm. Beasley Sur., 600 ft. S along E line of survey and 150 ft. W at right angles ..... T.D. 1,192 ft; plugged to 980 ft.

TYLER COUNTY

Republic Prod. Co. and Houston Oil Co.'s No. 1 Sam Jeffcoat, E. Thompson Sur., 467 ft. N and E from SW cor. of 100-ac. tract ..... Derrick.
Republic Prod. Co. and Houston Oil Co.'s No. 1017-E Kirby, E. Thompson Sur., 467 ft. N and E from NE cor. of Sam Jeffcoat 100 acres ..... Drlg. shale 4,759 ft.
Republic Prod. Co. and Houston Oil Co.'s No. 1016-E Kirby, E. Thompson Sur., 467 ft. out of SE cor. of 128-ac. tract ..... Drlg. shale 3,722 ft.

VICTORIA COUNTY

Gulf Prod. Co.'s No. 3 Keeran Ranch, Martin DeLeon Sur., 1,320 ft. NW of No. 1 ..... Drlg. wtr. sand 7,302 ft.
Stonelegh O. & G. Co.'s No. 1 E. B. Terrell, SW cor. R. Manchola Sur. No. 2 ..... Derrick.
The Texas Co.'s No. 6 McFaddin, 5,600 ft. S 15 deg. W and 450 ft. N 75 deg. W from E or NE cor. of Andrew J. Gary Sur. ..... Drlg. shale 2,815 ft.
Quintana Oil Co.'s No. 1 McCormic, 500 ft. from SW line, 500 ft. from NW line of S.A.&M.G. Sur., Sec. 3, in most westerly NW cor. ..... Coring sandy shale and lime 6,096 ft.

WALKER COUNTY

Hart Oil Co.'s No. 1 Thompson, Jose Ortega Sur., 1,265 ft. S, 1,874 ft. W of SW cor. of J. B. Gibson 71-ac. tract ..... S.D. 2,100 ft.

WALLER COUNTY

Birdwell et al's No. 1 Robertson, John Baker Sur., 1,625 ft. from S line, 450 ft. from W line of 64-ac. tract ..... Derrick.

WASHINGTON COUNTY

Yegua Oil Co.'s No. 12 Pomacal, S. M. Williams Sur., 1,282 ft. from W cor. of Shuls 44-ac. tract, thence 132 ft. NW at right angles ..... T.D. 1,515 ft.

WHARTON COUNTY

Pure Oil Co.'s No. 1 Stewart, 2,419 ft. NW, 1,650 ft. NE of S cor. of Sec. 25, Morris & Cummings Sur. ..... Drlg. brittle shale 4,708 ft.
Smith & Daniels' No. 1 Mitchell, H.&T.C. Sur. No. 8, 330 ft. from NE line of NE 80-ac. tract in center of tract NW and SE ..... Shale 6,718 ft.

SOUTH LOUISIANA

BEAUREGARD PARISH

Beaver Pet. Co.'s No. 1 Long Bell, 755 ft. S and 155 ft. E of NW cor. NW NW Sec. 34-2s-8w ..... No report.
Trapp & Turnbull's No. 1 Long Bell, 102 ft. N, 227 ft. W, out of SE cor. SE SW Sec. 26-2s-10w ..... Spudded and S.D.
Trapp & Turnbull's No. 1 Roberts, 600 ft. W, 150 ft. S of NE cor. NW NE Sec. 6-3s-10w ..... Location.

CALCASIEU PARISH

Cannon & Hughes' No. 1 J. S. Reed, Sec. 18-10s-12w ..... Derrick.
L. R. Irvine et al's No. 1 A. D. Mimms, 741 ft. N, 741 ft. W of SE cor. SE NE Sec. 30-9s-7w ..... S.D. 2,060 ft.

CAMERON PARISH

Southern Sulphur Co.'s No. 1 Gulf of Mexico, 330 ft. S, 338 ft. E of SW cor. Sec. 29-15s-10w ..... Location.

CONCORDIA PARISH

M. M. Stokes' No. 1 Pan American, 7,300 ft. W, 300 ft. N of SE cor. Sec. 13-9n-10e ..... Abd. 2,035 ft.

JEFFERSON DAVIS PARISH

B. D. Finly's No. 1 Clarphy Lognion, SW NW Sec. 22-10n-4w ..... Abd. 1,670 ft.
Humble O. & R. Co.'s No. 1 Devilbiss, 1,650 ft. S, 250 ft. W of NE cor. of Sec. 14-9s-4w ..... Drlg. shale and shell 4,858 ft.

LA FOURCHE PARISH

Lehulu Oil Co.'s No. 1 La. Fourche Land Co., 150 ft. out of SE cor. NW NW Sec. 32-18s-22e ..... Spudded and S.D.
V. N. Miller's No. 1 Sanbury, 150 ft. N, 100 ft. E of SW cor. Sec. 65-15s-15e ..... Location.

PLAQUEMINES PARISH

The Texas Co.'s No. 7 Garden Island ..... Cap rock 1,835 ft.

ST. BERNARD PARISH

Cook Drlg. Co.'s No. 1 Delecroix farm ..... Cap rock 5,100-04 ft; mixing mud.
Southern Sulphur Co.'s No. 1 Lake Levy ..... No report.
E. F. Simms' No. 1 Borgne, Shell Beach ..... No report.

TERREBONNE PARISH

The Texas Co.'s No. 8 State-Caillou Island, 1,050 ft. S, 2,770 ft. E of NW cor. Sec. 20-23s-20e ..... Location.
The Texas Co.'s No. 17 State-Lake Barre, 1,476 ft. W, 624 ft. S of NW cor. Sec. 20-21s-20e ..... Comp. 2,500 bbls. ½-in. choke, 3,733 ft.
The Texas Co.'s No. 8 Lake Pelto-State, 923 ft. S and 623 ft. E of NW cor. of Sec. 9-23s-18e ..... Drlg. 1,200 ft.

VERMILLION PARISH

Shell Pet. Corp.'s No. 1 Herbert, 1,310 ft. W, 330 ft. N of SE cor. Sec. 16-15s-1e ..... Drlg. shale and sand 4,769 ft.

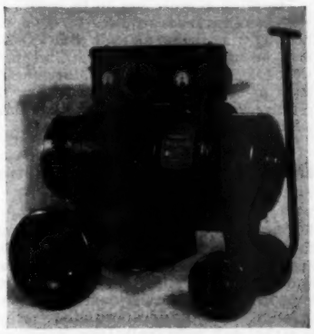
VERNON PARISH

R. E. Kay, tr.'s No. 1 Willis, 350 ft. N and 400 ft. E of SW cor. SE SE Sec. 32-3n-9w ..... S.D. 640 ft.

NEW AND IMPROVED EQUIPMENT

Increased Capacity Marks New Constant-Arc Welders

The newly designed Hobart constant-arc welder, announced by the Hobart Brothers Co., Troy, Ohio, is said by the manufacturers to afford 60 per cent more capacity than previous models. It is fitted for handling coated rods with their 42-volt requirements and 25-volt plain rod.



An important feature is the remote control, which enables the operator to weld while 50 to 100 feet away from the machine and have complete control of the welding current. According to the manufacturers, the welder is easy to operate and available in all kinds of weather.

In addition to more powerful motors to yield the increase in welding capacity, the new models are provided with drip-proof housings with three-point louvre ventilation. Besides thorough protection with exceptionally cool operation, the new design is improved in appearance, symmetrical and well balanced. Other features are reverse polarity switch with double scale meters, and selective reactance.

High efficiency, power factor and wide welding range are claimed for the new line, as well as uniform welding current, quick arc recovery, great arc tenacity and freedom from sticking and splattering. The new models are available in capacities ranging from 5 kilowatts (125 amperes at 40 volts) to 24 kilowatts (600 amperes at 40 volts), with electric motor or gasoline engine drive, as well as for pulley or coupling drive.

WORTHINGTON BULLETINS

F. A. Pope, publicity manager for the Worthington Pump & Machinery Corp., Harrison, N. J., says the following bulletins on direct-acting steam pumps of the horizontal duplex piston type may be had on request: W-101-S1, general service, capacities 35 to 320 GPM; W-101-S2, handling oils up to 350°, capacities 60 to 315 GPM; W-101-S3, general service, capacities 6 to 230 GPM; W-101-S4, handling oils up to 350° F., capacities 31 to 240 GPM; W-101-S5, handling oils up to 650° F., capacities 54 to 235 GPM; W-101-S6, handling oils up to 650° F., capacities 26 to 160 GPM; W-101-S7, condensate return service, supplied with automatic receiver, capacities from 14 to 34 GPM; W-102-S1, turret type for general service, capacities 34 to 725 GPM; W-102-S2, general service, capacities 175 to 345 GPM; W-103-S1, pot valve, handling oils up to 350° F., capacities 50 to 330 GPM; W-103-S2, handling oils up to 700°, capacities 66 to 240 GPM; W-103-S3, pot valve for general service, capacities from 56 to 98 GPM; W-103-S4, pot valve, outside end packed plungers, for boiler feed and pressure service, capacities 26 to 800 GPM.

Among the Equipment Houses

The Larkin Packer Co. has opened a warehouse in Houston, Tex., at 1701 Commerce Street, with a complete stock of Larkin equipment. J. J. Dailey, who has been associated with the company for several years, is in charge.

—

Philip M. Guba, who has been assistant manager of sales of the Republic Steel Corp. in New York since the formation of that company by merger in 1930, has been appointed assistant manager of sales in Detroit by the Carnegie Steel Co., subsidiary of the United States Steel Corp. Mr. Guba was for many years with the Jones & McLaughlin Steel Corp., Pittsburgh, and with the Donner Steel Co., Buffalo.

—

Creation of a department to handle all sales of cement mill equipment and composed of men experienced in cement mill operations and pulverizing equipment is announced by the Babcock & Wilcox Co., 85 Liberty Street, New York. This department will include representatives of the company in New York, Atlanta, Chicago and San Francisco under the direction of E. H. Fromm, New York, manager of the new department.

—

The Poole Foundry & Machine Co., Woodberry, Baltimore, Md., has appointed Frank M. Esch, P. O. Box 742, Houston, Tex., as direct representative in Texas for the Poole line of flexible couplings and reduction gears.

—

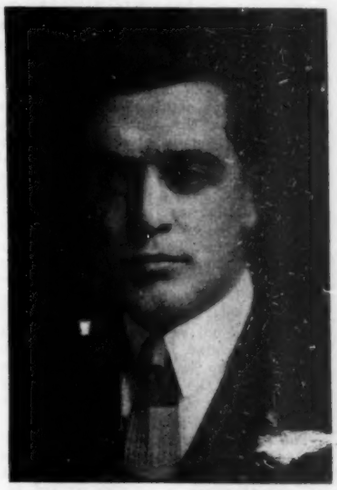
Tom Jackson, South Texas and Gulf Coast representative for the Petroleum Equipment Co. and Oil Field Engineering Corp. of Fort Worth, has moved his Houston warehouse and offices to 3205 Harrisburg Boulevard.

—

O. B. J. Fraser, formerly in charge of the International Nickel Co.'s research laboratory in Bayonne, N. J., is now in the development and research department at the company's main offices in New York in charge of developments in the uses of nickel and nickel alloys in the oil and gas industry.

Men Well Known in the Equipment Field

Rudolph Furrer, widely known in the pipe manufacturing industry as a research engineer, has been appointed as-



RUDOLPH FURRER

sistant to operating vice presidents of the National Tube Co., and will be stationed in Pittsburgh, Pa., according to announcement of F. W. Waterman, president.

Mr. Furrer, who has been active in designing electric pipe welding plants and equipment and has been identified with every step in progress made in the adoption of that type of pipe in the oil and gas industry, goes to the National Tube Co. to extend the research and engineering studies of the engineering and operating departments. He formerly was chief engineer and director of research for the A. O. Smith Corp., and also engineer for the Allis-Chalmers Manufacturing Co.

Vibrating Screen Cleans and Reclaims Rotary Mud

The improved vibrating screen announced by the Link-Belt Co., 2045 West Hunting Park, Philadelphia, Pa., is said by the manufacturer to provide an effective, economical method of reclaiming, degassing and cleaning rotary mud, saving wear and tear on pumps and valves by eliminating rough cuttings and sand from the mud and preventing the possibility of the drill bit plugging up, or of the tools sticking in the hole through the interruption of circulation.

When gas is present the mud becomes "gas cut," and unless the gas is removed before the mud is recirculated the normal weight per gallon is reduced and it becomes too light to be of practical use. It must be thrown away or built up to the required specific gravity properly to control the pressures encountered in drilling.

The screen is a simple mechanism in construction and operation. It consists of a fine mesh screen cloth carried in an especially constructed screen box resting on four heavy springs of the scroll type. This mechanism is supported on a combination steel framework and collecting tank.

A high-frequency vibrating motion is imparted to the screen box and the screen deck by means of a rotating shaft mounted directly underneath and attached to the screen box. The shaft is carried in dirt-sealed antifriction bearings. Mounted on this rotary shaft are adjustable out-of-balance pulleys, which permit variation of the intensity of vibration. The vibrator shaft is driven from an electric motor, steam turbine or suitable multi-cylinder gas engine.

The machine is set up in an inclined position at a convenient place outside the derrick in such a manner that the mud fluid discharged from the hole is delivered along the top edge of the screen. The mud passing through the screen passes into the collecting tank below, from which it passes to the pump sump. The coarse rejects fall off the lower end of the screen into a reject pit, and any gas escapes into the air during the screening process. The screen handles the discharge from the slush pumps, whether the mud be light or heavy.

Design of Mission Piston Embodies Unique Features

The Mission piston, announced by the Mission Manufacturing Co., 2416 Railroad Street, Houston, Tex., is designed for the utmost efficiency in slush and reciprocating pumps. The piston body consists of an alloy-steel hub and central flange with steel studs in the flange for the purpose of holding the rubbers securely in place.

The rubbers are slipped over the studs, one rubber on each side of the flange, and held in place by washers and cotter keys. When in place the rubbers form a seal around the central flange and the studs and expose ample wiping and sealing surfaces to the liner. The back of the rubbers where they contact the flanges are supported by scientificially constructed and molded fabric through which the rubber is impregnated under pressure.

Advantages of the Mission piston as enumerated by the manufacturer include: 1. It is light in weight, thus saving drag on liners and rods. 2. Its rubbers can be replaced without removing the piston rod nuts, thus affording savings in replacement cost. 3. Owing to the increased mass of free flowing rubber, the piston gives added hours of trouble-free service.

The body of the piston is so constructed that a minimum quantity of metal is required to support a maximum quantity of rubber. This construction for supporting the rubber reduces the weight of the piston approximately one-half and it increases the efficiency of the piston under high pressures, cutting rod and liner upkeep. The greater wiping surface eliminates by-passing thereby lengthening the life of the pistons and liners. The method of holding the rubbers to the metal body makes it unnecessary to use heads and follow plates. Rubbers pass freely over the piston rod nuts.

TRACKSON ADDS TO PRODUCTS

The Trackson Co., Milwaukee, Wis., has added three-way crawler dump wagons with 7-10½ cubic yard capacity to their dirt-hauling wagons. The company formerly manufactured two sizes of bottom dump wagons, one size three-way dump wagon and two sizes of crawler wheels.

Formula for Controlling Corrosion of Brine Tank

The laboratories of D. W. Haering & Co., 3408 West Monroe Street, Chicago, continuing their research on corrosion problems, have developed a formula for controlling brine tank corrosion which utilizes colloidal glucosides to control electrolysis by buffer effect. The formula is adjusted to establish proper pH on initial treatment and the buffer action of the glucosides maintains this pH over extended periods of time without frequent additions of material. Oxygen is eliminated through direct chemical combinations, a feature of all of the company's anticorrosion products.

H-O-H brine treatment, marketed by the company, is said to be effective in salt or calcium chloride brine and to be a valuable agent for prevention and removal of lime and rust deposits from circulating brine systems.

The South Bend Lathe Works, South Bend, Ind., has issued a new general catalog, No. 93. This 72-page booklet illustrates, describes and prices the entire line of South Bend lathes in sizes from 8-inch swing to 24-inch swing.

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the questions is considered to be confidential.

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

Extraction of Iso-octane From Natural Gas Not Practicable

Will you please advise as to the method and equipment required for the extraction of iso-octane as a separate product from natural gasoline? Information as to the uses for iso-octane, general market demand, the methods of shipment and any other information relative to this product is greatly desired.—J. C. M.

The petroleum hydrocarbons are in most instances obtained by the process of distillation, the usual practice being to separate them in groups to make up the several commercial products, natural gasoline, petroleum naphtha, gasoline, kerosene etc. As a consequence these products do not have fixed boiling points, but may boil over a range of several hundred degrees. This range is shown by the initial and maximum (endpoint) boiling points. Many natural gasolines have been reported to contain iso-octane, but since this substance boils at 210.7° F., it would not be feasible to extract it from the gasoline, because it would have to be removed by distillation from the very center of the product; that is, about half way between the initial boiling point and the endpoint.

The fact that the physical and chemical properties of iso-octane are similar to those of other hydrocarbons makes it difficult to obtain a satisfactory separation from a mixture of the closely related compounds in natural gas. The quantity that may be present in natural gas depends upon the source of the gas, but the total quantity of octanes would probably in no case exceed 0.5 per cent, maybe 0.05 to 0.1 per cent iso-octane, and it would be difficult to make fractionation close enough to permit anything like a satisfactory separation of pure iso-octane from the other hydrocarbons when making natural gasoline. The conditions of distillation would have to be extremely well balanced, as even the slightest variation in the physical conditions would result in loss or contamination.

The equipment for the separation of iso-octane should be similar to that employed for the extraction of propane and butane from gas; that is, a suitable tower under adequate temperature control. Some mixed octanes used as solvents, boiling between 210° and 280° F., are made in this way.

The preparation of pure iso-octane, as proposed by Doctor Edgar for the knock rating of motor fuels, is based on the decomposition of butyl alcohol. The Edgar method is described in Ind. Eng. Chem., 19,146; 1927, as follows:

In a 12-liter flask place 3 liters of water and add 3 liters of sulphuric acid (specific gravity 1.83). When cold add 3.5 liters of commercial (constant boiling) butyl alcohol. Then heat for eight hours in boiling water, under an efficient reflux condenser, keeping the temperature well up to 100° C. Cool, separate the oily layer, wash with water, and dry over calcium chloride. Distill twice over sodium, collecting the portion 98°-110° C. Yield 1,900 c.c. octane (75 per cent of theory).

Hydrogenate the purified octane by passing over a nickel catalyst at 155° C. and repeating once. This gives 97-98 reduction. Shake with concentrated sulphuric acid until the acid is not colored, then with sodium hydroxide and water. Distil over sodium through an efficient column, collecting the portion 98°-99° C.

There is only a limited demand for pure iso-octane. The most important use for it is for blending with normal heptane for the standard mixtures that are used when making knock tests. These tests are made under conditions that permit the matching of the fuel with the known mixture; hence the term octane number. The iso-octane used for this purpose sells at the rate of about $25 a gallon. The methods and regulations for shipment are the same as for gasoline.

Volume of Alcohol Varies With Temperature

Is consideration given to temperature correction in the sale or purchase of denatured alcohol? We have experienced shortages in drum shipments of alcohol to the extent of some 2 to 3 gallons per drum and are informed that alcohol was sold with consideration to temperature adjustment and that the full capacity of a drum is by weight.—O. V. K.

Alcohol is purchased and in most instances handled on the volume basis. The only exception to this in ordinary commercial transactions is transportation, the freight charges being by weight. The liquid volume is determined either from the weight or from established measurements and finally corrected for temperature. The temperature correction is based on the standard temperature of 60° F., the deduction from the found or stated volume being made for temperatures above 60° and added when the observed temperature is below 60° F. This volume correction is seldom applied where small volumes are involved, as for drum shipments, but is made for large quantities, such as tank car shipments. For certain scientific work the temperature of 32° F., the freezing point of water, is used when making volume corrections and a table showing the percentage change in volume of ethyl alcohol (the base of denatured alcohol) and methyl alcohol will serve to illustrate the extent of differences that may be expected over a range of temperature from minus 30° to 80° F.

EXPANSION OF ALCOHOLS
(Per cent by volume)

Temp. °F.	Ethyl alcohol 80 per cent	Methyl alcohol pure
	Decrease	
−30	3.00	4.00
22	2.60	3.40
+ 5	1.30	1 75
15	0.92	1.20
25	0.50	0 60
32	0.00	0.00
	Increase	
40	0 42	0.60
50	0.95	1.20
60	1.49	1.84
70	2.03	2.58
80	2.57	3.29

According to the decrease in volume shown in this table, ethyl alcohol of 80 per cent strength would contract to the extent of 1.5 gallons in a 50-gallon drum if the first measurement were made at the freezing point of water and the second at 30° below zero.

Temperature is not considered when making retail sales or when purchasing small quantities in drums for sale at filling stations. While the kind and quantity of the denaturant will influence the rate of expansion, or contraction, the change in volume should not be large enough to make an appreciable difference.

Comparative Costs and Heating Values of Coal, Oil and Gas

Can you give the data relative to the costs and equivalent heating values of the several fuels that are used for power development?—W. J. B.

The cost of several fuels cannot be stated on a basis which may be generally applied because local conditions and supply govern the matter of price. Transportation expense is an important item. A convenient means for estimating comparative costs is to reduce the quoted prices of the different fuels to a B.t.u. basis.

There are so many variables that have to be considered and under control, when determining the relative values of the three fuels, coal, oil and gas, used in the larger high pressure steam plants it is impossible to make any comparisons that will be more than approximations. The size and shape of the furnace should be suited to the fuel. In large installations it is not possible to change the furnace with the fuel, but there is no reason to expect to obtain equal efficiencies with different types of fuel in the same furnace. The several methods for firing coal do not give equal results. Various forms of burners are used both with gas and oil and these will show, upon proper investigation, different efficiencies.

Approximate equivalents are—1 ton of good coal is equal to 3 bbls. of fuel oil, or 18,000 cubic feet of gas. Exact comparisons require analyses of the fuels in question. The American coals have a total heating value between 10,000 and 15,000 B.t.u. per pound; natural gas is usually considered at 1,000 B.t.u. per cubic foot, or 22,000 B.t.u. per pound. Wide variations in the delivered efficiencies have been obtained when firing coal; these range with chain grate stokers between 27 and 60 per cent. When cold air is used 46 to 59 per cent and with hot air from 56 to 75 per cent, but efficiencies of 80 per cent have been reported with pulverized coal and recirculating systems. Fuel oil may deliver from 60 to 80 per cent.

In addition to the factors that have been mentioned, there is the consideration that gas is fired at both high and low pressures, making the efficiency vary from 40 to 90 per cent.

Handling expense has to be considered with coal. Steam is required for pumping, heating and firing fuel oil. Stack losses may be high with gas. The points mentioned here and numerous other factors have to be considered when studying the relative values of fuels. The actual B.t.u. rating is simply a foundation.

Dilution Ratio Test for Petroleum Lacquer Diluents

We will appreciate receiving all the information you can give us in regard to the procedure, apparatus and necessary solutions for a tolerance or solvent power test of lacquer thinner. We understand that ethyl acetate and nitrocellulose solutions are required but we are at a loss to know of just what strength the solutions are and just how they are used.—N. S. R.

The American Paint and Varnish Manufacturers Association publish in circular No. 378 a description of the dilution ratio test, as follows:

This test is used extensively by lacquer chemists, but the endpoint is very difficult to discern. Therefore, results vary according to the individual technique of the operator.

Two grams of one-half second nitrocellullose are dissolved in 20 c.c. commercial butyl acetate, and titrated with the desired diluent until the nitrocellulose is precipitated or forms a permanent gel structure. The results are reported as the number of c.c. of nonsolvent per c.c. of base solution in butyl acetate required to reach the endpoint. If the final concentration of nitrocellulose is not between 7.5 to 9.0 per cent, a second trial is made (which is often the case with petroleum diluents) and the base solution adjusted so that the final concentration will fall within the above specified range. The final concentration (at the gel point) should always be mentioned when stating the dilution ratio.

A good petroleum solvent should show a dilution ratio close to 1.2 with a final concentration of about 9 per cent.

It may be stated that a properly refined petroleum distillate for use in a lacquer formula should have the following characteristics:

Nonobjectionable odor.
High flashpoint.
A kauri butanol value of 35 or better.
An aniline point no higher than 60° C.
A high dimethylsulphate value.
Evaporation rate somewhat similar to that of coal tar diluents.

If a lacquer formula is made to include a little more n-butyl alcohol than is commonly used with the coal tar extenders, much more of the petroleum hydrocarbons can be used. (For instance, 85 per cent petroleum hydrocarbon and 15 per cent butyl alcohol withstands dilution ratio of 2.0 as compared to 1.2 for the same hydrocarbon alone). It has also been proved that formulas containing monoethyl ether of ethylene glycol (cellosolve) will tolerate more petroleum hydrocarbons than those employing ethyl acetate. It is, of course, essential that the products used in lacquer be water white in color.

NATURAL GAS DEVELOPMENTS

California Rate Reduction Before U. S. Supreme Court

An order of the Railroad Commission of California fixing rates for gas service by the Los Angeles Gas & Electric Corp., allowing a net return of 7.7 per cent and 7 per cent, respectively, on amounts fixed for historical cost and present fair value was brought into question in an appeal heard by the Supreme Court of the United States.

The position of the company is that the commission accomplished its result by fixing a value which was arrived at on a purely arbitrary formula, one which ignored actual cost, present cost of reproduction, and present fair value of the property. The order, entered in November, 1930, effected a reduction of 9 per cent in existing rates.

Denial of an injunction by a three-judge Federal district court to prevent enforcement of the order on the ground that the rate base was reasonable and that the rates fixed allowing a net return of 7.7 and 7 per cent were not unreasonable, results in a deprivation of due process and equal protection of the laws and a taking of property for public use without just compensation, Herman Phleger, counsel for the company, asserted.

Neither the commission nor the lower court gave sufficient consideration to either historical cost or the cost of reproduction, but fixed a rate base many millions of dollars less than the actual cost and present value upon "the erroneous theory that actual cost and present value should be rejected and ignored by reason of errors in the company's books of account." The historical cost figure used was more than $2,000,000 less than the actual cost incurred in the construction of the property.

Despite evidence of the commission's engineers that the cost of reproduction is not less than $73,637,000 the so-called fair value was fixed at $63,637,000, he said, adding that no allowance was made for going concern value which amounted to almost $10,000,000.

The 9 per cent reduction was ordered in the face of evidence of business depression and a decline in earnings, Mr. Phleger continued. "The reduction was predicated wholly upon the earnings that would have accrued had temperatures been colder than were in fact experienced, had more consumers been attached than were in fact served, and had more gas been sold than was in fact sold. Actual experience of the company was disregarded and the reduction ordered solely upon the basis of an assumed average or 'normal' condition, which, if exactly applied, the commission's own engineer testified, would have resulted in less than a reasonable return to the company throughout the preceding six years."

He also asserted that depreciation was improperly measured by depreciation reserve and not by examination and appraisal, and no consideration was given to evidence showing that the fair rate of return was not less than 8 per cent.

Answering the company's contention that the historical cost figure was deficient more than $2,000,000, Arthur T. George, counsel for the commission, said the difference was due to claimed indirect construction costs which engineers for both the company and the commission testified might, in estimating historical cost, reasonably have been included as capital charges.

The item of overheads, he continued, represents merely what was once deemed by the company to be a proper operating expense, and so entered year by year. It cannot now be drawn from past expense allowances and used to augment its capital account, he claimed.

Mr. George said the company's fair value figure of $95,767,000, made up of reproduction cost new of the physical property augmented by other claims, was without merit. He said that the commission fixed a fair value rate base for 1930 of $65,500,000, subject to a deduction for accrued depreciation of not less than $7,650,000.

He said the lower court correctly overruled the company's contention that the evidence required a finding that 8 per cent is a reasonable rate of return. The lower court said the question of the percentage of return on a public utility depends to a large extent on the hazard as well as the current price of money which also varies with the hazard. "We do not accept the testimony of financiers that 8 per cent represents the rate of return upon 'similar' enterprises, for the fact is that there are no similar enterprises except other gas companies and electric companies operating in California under the jurisdiction of the commission whose rates are fixed in the same manner as those of the plaintiff."

Central West Utilities to Supply Kansas Towns

TOPEKA, Kans., Mar. 6.—The Central West Utilities Corp. has applied for permission to purchase the gas distributing systems in 18 Kansas towns and provide the necessary pipe line facilities to furnish the citizens with an adequate supply of natural gas. The company has options to purchase the distributing systems of Bonner Springs, Aulne, Council Grove, DeSoto, Eudora, Florence, Herrington, Hillsboro, Lincolnville, Linwood, Lake of the Forest, Lost Springs, Marion, Peabody, Ramona, Tampa, Wilsey and White City. The properties are in two groups, the smaller being in Wyandotte, Leavenworth and Johnson Counties, and the other in the central part of the State, in Marion, Dickinson and Morris Counties.

The gas distributing systems were part of the property of the General Utilities Co. and were purchased at a trustee's sale in Kansas City, February 8. Approval of the transfer by the Public Service Commission would be necessary before the new company could take control. The sale by the trustee must be approved by the Federal Court.

UNITED CARBON REPORT

Net profit of United Carbon Co. for 1932 is likely to be between $145,000 and $150,000, after deducting about $650,000 for depreciation and depletion and more than $175,000 to reduce inventory to lower of cost or market.

The inventory write-off reflects the unsatisfactory price situation that prevailed in carbon black; the physical volume of carbon black sales by the company is understood to have exceeded that of 1931. Natural gas sales in 1932 were some 20 to 25 per cent greater by volume than in the preceding year.

For 1931 the company reported net loss of $397,769 after $296,962 write-down in inventories and all other deductions. There are 18,091 shares of 7 per cent participating noncumulative preferred stock outstanding, on which dividents have been omitted, and 368,885 shares of no par common.

SOUTHERN UNION BUYS PIPE

Spang, Chalfant & Co., Inc., has secured a contract for 2,000 tons of 8-inch steel pipe from the Southern Union Gas Co.

Sales by Gas Utilities Showed Decline in 1932

Revenues of manufactured and natural gas utilities aggregated $636,189,080 during 1932 compared with $678,679,710 during 1931, a decline of 6 per cent, according to reports from companies representing more than 90 per cent of the utility distribution of manufactured and natural gas.

The manufactured gas companies reported revenues of $370,384,269, a drop of 5.3 per cent, while revenues of the natural gas concerns totaled $265,804,811 or 7.5 per cent less.

Sales of manufactured gas reported for 1932 totaled 345,860,273,000 feet, a decline of 4.8 per cent, while natural gas sales for the year were 643,400,105,000 feet, a drop of 8.6 per cent.

For comparison with other fuels, the production of bituminous coal during 1932 declined 20 per cent from the preceding year, anthracite coal production dropped 17 per cent, crude petroleum output was down 7 per cent, coke production down 35 per cent, while the production of electric power declined 10 per cent.

These economic adjustments characterizing most of the basic fuel industries were reflected in the production policies of the manufactured gas companies during 1932. The declining trend in the production of water gas continued, output averaging almost 11 per cent under the previous year. While the quantities of coke oven gas produced in plants owned by gas utilities decreased 10 per cent the volume of coke oven gas purchased from sources outside of the industry, such as merchant coke and steel companies declined over 14 per cent.

Regulation of Gas Rates in Smaller Texas Towns

AUSTIN, Tex., Mar. 6.—Delegations representing interests affected appeared before the State Affairs Committee of the senate to protest a bill proposing regulation by the Texas Railroad Commission of distribution of gas in the smaller towns and cities.

The bill is sponsored by Senator E. J. Blackert of Victoria and is about the same as put through the legislature during the last session and vetoed by Governor R. S. Sterling.

The bill would prohibit the raising of rates in unincorporated and incorporated towns of less than 500 population without notice and a hearing. The railroad commission would be authorized to make appraisals and audits in incorporated towns and cities of 10,000 population or less for rate purposes. The commission also would be permitted, under certain conditions to aid cities of 10,000 population or more in appraising properties and making audits of gas utilities. A small tax would be levied against the utilities concerned to pay the cost of the appraisals and audits.

GAS UTILIZATION DISCUSSED

CHATHAM, Ontario, Mar. 6.—The associate committee on gas research of the National Research Council held a meetisg at Edmonton when the Turner Valley gas problem was discussed. Announcement was made by Dr. G. S. Whitby, director of the division of chemistry, that all experimental results obtained in the extraction of benzine from the stripped gas are now to be studied from the aspect of utilization.

Among those who took part in the meeting were Dr. E. H. Boomer, in charge of the experimental work conducted at Calgary; P. V. Rosewarne, of the federal staff; F. E. Lathe, director of the division of research information at Ottawa, and John McLeish, director of the federal mines branch. Dr. R. C. Wallace presided.

Missouri-Kansas Line Agreement Is Reached

WILMINGTON, Del., Mar. 6.—Chancellor J. O. Wolcott has approved the proposed agreement between the Missouri-Kansas Pipe Line Co. and a noteholders committee in settlement of a suit brought to foreclose on collateral which secured $1,060,000 of 6 per cent gold notes of the company. The agreement was recommended by C. Ray Phillips of Chicago and Henry T. Bush of Wilmington, receivers for the company.

Under the settlement and a plan of reorganization of the Kentucky Natural Gas Co., a subsidiary of Missouri-Kansas Pipe Line Co., the receivers of the latter company will retain an interest of about 47 per cent in common stock of Kentucky Natural Gas Co., and an interest of 25 per cent of common stock of Panhandle Corp., another subsidiary. The last named owns a half interest in Panhandle Eastern Pipe Line Co., the owner of gas acreage in and near the Panhandle district of Texas and a pipe line of about 1,450 miles extending to Terre Haute, Ind.

PACIFIC COAST SALES

LOS ANGELES, Calif., Mar. 6.—Sales of gas in Pacific territory totaled 124,653,000,000 feet in 1932, a decrease of about 16 per cent from 1931, the Pacific Coast Gas Association reported.

There was an increase of about 7 per cent in the year's sales to domestic consumers, the amount being 62,834,000,000 feet compared with 58,693,000,000 feet in 1931. Commercial and industrial consumption was down about 31 per cent to a smaller figure than the domestic sales —61,818,000,000 feet.

Gross revenues of all the companies serving British Columbia, Washington, Oregon, California, Nevada and Arizona declined about 2 per cent to $74,959,736. The employment list remained relatively steady, totaling 11,432 compared with 11,544 a year ago.

MEXICAN GAS LINE

There are in operation in Mexico 3,226 miles of oil and gas lines with a monthly capacity of 2,107,263 bbls. and 38,513,000 feet of natural gas. There has been completed recently a gas line from the Mier oil fields in northern Tamaulipas where a productive gas well was brought in during 1931 to the city of Monterrey. This line will supplement the gas that city is importing by a pipe line from the South Texas fields.

BUILDING SMALL LINE

MIDLAND, Tex., Mar. 4.—Construction of a natural gas pipe line from Stanolind Oil & Gas Co.'s No. 1 Brown in Ward County to the Ozark Chemical Co.'s plant on Soda Lake was started this week. It is a 2-inch line about 3 miles long. The company will use natural gas in operation of its sodium sulphate refinery.

PEOPLES GAS DIRECTORS

CHICAGO, Mar. 6.—At the annual meeting of Peoples Gas Light & Coke Co. stockholders elected six new directors as follows: Sewel L. Avery, Howard W. Fenton, Charles B. Goodspeed, Donald R. McLennan, James Simpson, and Melvin Traylor. George F. Mitchell, president of the company, was re-elected a director.

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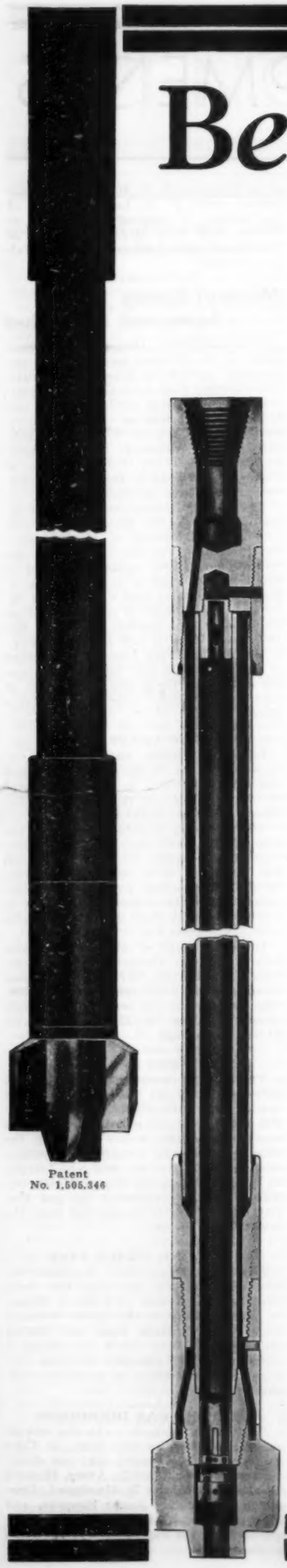

Patent
No. 1,505,346

Why depend on the law of averages to give you a full recovery of the core when you can be sure by using the new Brewster Automatic Core Barrel.

The core you take with the new Brewster Automatic Core Barrel can be read like a book. The cores are clean, unbroken and free from foreign substances because the inner barrel has been washed clean. This is done by water passing through, but when the coring begins the ports automatically close, and the water is directed around the inner barrel and to the bit. The position of the valve in the top of the barrel prevents pressure from holding the ball down which permits soft sand core to enter the barrel without resistance.

This barrel, as are Type "C" and Type "M" Barrels, is equipped with the Brewster Split Liner, which permits the core being removed without breaking.

By use of the Type "M" Bit Body ROLLER CUTTER HEADS can be used with Brewster Core Barrels.

Type "M" Cutter Head

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★ The best insurance you can have against a fishing job is the Brewster Safety Drill Collar which gives a positive lock for any type of Bit. ★

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing or transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Steam for Removal of Paraffin From East Texas Oil Tanks

I am bothered a great deal by paraffin collecting in my oil tanks and have been considering the use of steam for cleaning them out. I know this method has been used with good results, but I find some oil men in this district are opposed to it. I would appreciate advice on this subject.—L. T. A.

It is true that steam has been used with success in removing paraffin, but it is assumed that your operations are in the East Texas Field, and if the assumption is correct, you are advised against this method. W. T. Doherty and R. C. Buchan, petroleum engineers for the Humble Oil & Refining Co., give the following advice concerning the use of steam for removing paraffin in the East Texas district:

"Heating East Texas crude is a bad practice under any conditions because, although paraffin might be put back into solution, it will precipitate the second time at a higher temperature. This is in direct contrast to Panhandle crude in which heating causes a more stable solution and a lowering of the congealing temperature. Steam coils in the bottom of tanks would, therefore, more than likely defeat their own purpose.

"Live steam has been used in the following ways: (1) Melting the bottom and flowing the liquid paraffin to the burning pit; (2) heating all the oil in a tank which contains high bottom in an effort to redissolve the paraffin in the tank of oil; and (3) heating the bottom with an equal volume of crude and mixing this hot liquid with oil by filling the tank with more crude. These methods, although effective, are objectionable because of (1) cost of steam equipment and labor to operate, (2) danger of cutting oil, and (3) failure of paraffin to stay in solution. Following are descriptions and results of using the various methods.

"A bottom can be melted and bled from the tank by applying steam through an open 2-inch bleeder line in the line and heating to 150° F. but from 1 or 2 inches of paraffin remains which will not gravitate from the tank and must be removed by taking off the b.s. plate.

"A full tank of oil having a 12-inch solid paraffin bottom was steamed through a bleeder line. The temperature did not rise high enough to melt the paraffin or redissolve it. The steam emulsified the oil. The emulsion settled out and had to be bled off before the rest of the tank could be run. This is wasteful and proved to be ineffective in so far as the tank had to be cleaned by removing the b.s. plate.

"Cleaning tanks with steam and combinations of steam and chemicals has also been tried in the following manner: A foot of production is run into the tank containing a high paraffin bottom. The chemical is dumped in and the complete contents are warmed and agitated by steaming through a 2-inch bleeder line. When the contents of the tank reaches approximately 140° F the paraffin is in solution in the oil and production is then run into the tank. Heating the bottoms with steam and running with the tank of oil does not seem to be an effective method of cleaning since the paraffin is not kept in solution and settles back to bottom. The danger of cutting the oil is a decided disadvantage, but various chemicals might be used to prevent emulsification.

"In general, the use of steam for tank cleaning is highly impractical when costs, nature of the paraffin bottoms and other previously enumerated factors are considered."

These engineers recommend gas rolling as a measure to prevent formation of paraffin in tanks. A spider made of perforated pipe connected to a gas line from the separators is laid on the bottom of the tank. The oil is rolled as the tank is filled, causing any paraffin in the bottom to be dispersed and probably partially dissolved or suspended in the oil. The b.s. plate was removed on several tanks in which this system had been used for about 90 days. No paraffin was found above the spider.

Such a system depends on (1) sufficient gas pressure to roll; (2) constant application is necessary to make it effective; (3) tanks must be allowed to stand in order that the gravity and gauge may be taken correctly; but the system is giving good results wherever the practice is allowed by the pipe line companies.

Removing Accumulations of Dirt and Oil From Leather Belts

May I ask how a leather belt can be cleaned best? There seems to be just enough oil on some belts to catch dirt and rust. But even when there is no oiliness enough dust seems to collect to make the belt sort of shiny and I think it makes the belt slip. I haven't hit on any good way of getting the dirt off.—R. A. W.

Belts should be kept clean to obtain the greatest possible efficiency and the longest possible life from them. The movement of a belt draws particles of dust flying in the air and these stick to the belt. If the belt has an oily surface this dust becomes caked. If no oil is present, the dust is likely to glaze the surface and make it shiny, as you say some of your belts become. Slipping on the pulley often results from this condition.

In the case of dirt accummulated on a belt which shows no evidences of oiliness a square block of wood may be used as a scraper. The scraping should be done with care, always drawing the scraper in the same direction as that of the point of the lap, so that the leather will not suffer injury.

In the case of oily belts the following directions are given in the "Treatise on Leather Belting" by Haven-Swett: "Oil may work out of the bearings or machines onto the belt and the surface become so oily that it will actually slip on the pulley. If the belt is not too oily, the oil can be removed without taking the belt off the pulleys by spreading powdered chalk on the belt and allowing it to stand for some time. Chalk absorbs oils and can be scraped off. About 1 pound of chalk will cover 6 square feet of belt surface. Surface grease in moderate quantities can be washed off the belt with a cloth soaked in gasoline or carbon tetrachloride.

"If there is too much oil or grease in the belt to be removed by these methods, it must be taken off the pulleys and degreased. This is accomplished by agitating the belt immersed in a tank of gasoline or benzol. It is impossible to say how long a belt should be immersed, as the time depends upon the amount of grease and dirt to be removed, and the condition of the solvent. When the grease has been removed and the belt allowed to dry thoroughly the belt must be dressed again to replace the natural lubricants which have been removed from the belt along with the excess oil."

Why Was It Called That?

LAZYBOARD

The lazyboard gets its name from the fact that the man who handles it is looked upon as having the easiest, or laziest, job of all the pipe line crew. The lazyboard itself is ordinarily a piece of 2-inch plank about 12 inches wide and 18 inches to 2 feet long, equipped with a handle nailed to one corner. It is used as a support, or horse, for the last joint of pipe screwed on while the next one is being stabbed and screwed on. Besides putting the lazyboard in place, just back of the collar of the joint of pipe which is to rest on it, the operator of the contrivance need exert himself only to the extent of beating time on the collar with a hammer to aid the tong men to work in unison in screwing on the next joint.

Color of Soil Provides an Index Regarding Corrosive Quality

Does the color of soil indicate anything regarding its corrosive quality? For example, is a dark-looking soil likely to be more acid than a light one and vice versa? Can you refer me to any publication that gives information about peculiar characteristics of the soil in varous parts of the country with reference to the likelihood of its corroding buried pipe? I believe the Government sometimes publishes things of that kind. I wish you would tell me which department of the Government I should write to in order to obtain its publications on soil corroson and similar subjects in whch I am interested.—E. L. F.

Answering the second part of your question first, it is suggested that you write to either the Government Printing Office or the Department of Agriculture and ask for available soil maps and soil reports. Soil maps covering about half of the agricultural land of this country have been made. Some southern states have been completely mapped. In these maps the soils have been classified into a large number of soil series. The series are distinguished and mapped by the soil surveyor on the basis of their appearance, a few analyses being made to check the field men in questionable cases. These soil maps, together with a report describing the soils which are located on the map, are usually issued for each county and they may be obtained from the Department of Agriculture or from the Government Printing Office as long as they are in print.

Many men in the oil and gas industry are using these soil maps. Some who have tried them recommend their use more highly than others. Every distribution engineer should at least obtain a soil map covering a part of his area and see if he cannot recognize the principal soils on the map. In fact he is already familiar with them if he has observed many trenches in his district. If he learns that the pipe is corroded rapidly in one type of soil, he can expect pipe everywhere in that soil to be corroded at essentially this same rate. It need not be feared that these soil reports and maps are too involved to understand readily. They are prepared so that the layman should be able to understand them. It would be a formidable task for the average person to become familiar with all of the soils in the country, so that he could recognize them in the field. But it would be a relatively simple matter for any distribution engineer to become familiar with the soils in his territory.

With reference to the first part of your question, it is a fact that the appearance of a soil is a real index of its character. Scott Ewing, American Gas Association research associate, U. S. Bureau of Standards, says it is an established fact that soils which look the same to a soil surveyor are actually the same, within limits, while soils which look differently are actually different in their physical and chemical properties. Some soil series are remarkably uniform in their properties and their corrosion rates, wherever they occur. Such soils are also uniform in their appearance. Other series include soils which vary considerably in both corrosiveness and appearance. The Cecil series, of which there is an area of about 25,000 square miles in Georgia and the Carolinas, is a good example of a uniform soil series.

PERSONAL PARAGRAPHS

W. L. Black, of Fort Worth, Tex., has removed to Odessa, Tex.

* * *

E. C. Hackett, Florence, Colo., is now located at Ponca City, Okla.

* * *

Sir Albert Stern, K.B.E., vice president of the Steaua Romana, S.A., and Lady Stern, have left London for Cannes.

* * *

Dr. Ing. A. Castelletti, of Azienda Italiana Petroli Albania, with headquarters at Valona, Albania, is visiting in New York.

* * *

J. C. Ballagh, president of Patterson Ballagh Company, Los Angeles, Calif., is spending two weeks in Houston and the Gulf Coast.

* * *

J. B. Aug. Kessler, joint managing director of the Royal Dutch Petroleum Company, returned to London, England, from New York.

* * *

Ralph J. Reed, consulting engineer, Los Angeles, Calif., was recently elected a director of the American Society of Civil Engineers for a three-year term.

* * *

E. Russell Lloyd, consulting geologist, Midland, Tex., will address the West Texas Geological Society at its monthly meeting, on "Limestone Deposition."

* * *

Glenn Harrow, division superintendent of the Sinclair Prairie Oil & Gas Company for the Texas area, is spending some time at Houston on company business.

* * *

E. M. Carter, civil, mining and hydraulic engineer of Fort Worth, Tex., is making a tour of California oil fields and at the same time enjoying a little vacation.

* * *

C. D. Little, vice president in charge of sales for the Crane Company, Chicago, is on a tour of branch offices of the company and stopped off at San Antonio and Houston, Tex., last week.

* * *

Dr. A. E. Dunstan, F.I.C., chief chemist of the Anglo-Persian Oil Company, has been nominated for election as a vice president of the Institute of Chemistry of Great Britain and Ireland.

* * *

P. W. Fenton, purchasing agent, the Tidal Oil Company, Tulsa, is in Houston, Tex., arranging for purchase of equipment necessary for its drilling campaign in the Conroe area where the company recently acquired large holdings.

* * *

Ernest A. Obering has been appointed district geologist for Shell Petroleum Corporation at San Angelo, Tex., to succeed Russell C. Conkling who was recently promoted and transferred to Houston, Tex. Mr. Obering has been stationed at Carlsbad, N. Mex., for the past few years.

* * *

F. T. Norris, for 18 years with Imperial Oil, Ltd., has been named manager for the Edmonton, Alberta, district, in succession to Frank Turley. Mr. Norris was previously assistant manager at Regina and Winnipeg and manager at Brandon, Manitoba. He opened the Imperial Oil, Ltd., branch at Fort Churchill on Hudson's Bay and supervised the building of the warehouses at that port.

* * *

William C. McDuffie, organizer of the Pacific Western Oil Company, at present serving as receiver of Richfield Oil Co., was one of three recently chosen members of the board of trustees of the California Institute of Technology. Henry M. Robinson, who headed Union Oil Associates at the time of its merger with Union Oil Company; Henry W. O'Melveny and Harry J. Bauer, are others in petroleum circles who serve as trustees for California Tech.

R. F. Garland, of San Antonio, Tex., formerly of Tulsa, is visiting Houston, Tex.

* * *

A. M. Butcher, engineer for the Boston Woven Hose Company, Tulsa, is making a trip over Texas fields.

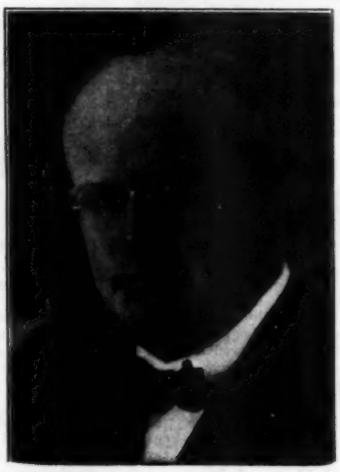
* * *

Eliot Davenport, who has been in charge of operations for the Shell Petroleum Corporation in East Texas, is at present in Europe where he is to spend several months visiting the oil fields in which the Royal Dutch-Shell is interested.

* * *

On the eve of his departure to take charge of the Imperial Oil, Ltd., branch at Victoria, British Columbia, Frank Turley, for 14 years manager of the Edmonton district, was tendered a banquet by the Edmonton staff. Mr. Turley received a gold watch and chain from the staff.

Men of the Industry



R. A. BROOMFIELD

R. A. Broomfield, president of the Barnsdall Oil Company, president of the Barnsdall Oil Company of California, and executive vice president of the Barnsdall Corporation, was born in Altoona, Pa., about 59 years ago, and he entered the oil business with the J. M. Guffey Oil Company, which brought in the famous Lucas gusher in the Spindletop Field, Texas. Since 1903 he has been with the Barnsdall interests. He was made vice president and general manager of the Barnsdall Oil Company of California in 1915, a director and vice president of the Barnsdall Corporation in 1919 and in 1927 he was advanced to the presidency of the California organization. In 1931 he was made executive vice president of the Barnsdall Corporation and on April 1, 1932, upon the retirement of E. B. Reeser as president of the Barnsdall Oil Company, he succeeded Mr. Reeser in that office.

Mr. Broomfield is a director of the American Petroleum Institute and chairman of the production group of the Western Division of that organization. He is a past president of the California Oil and Gas Association and was active in the formation of the California Oil Producers Sales Agency. He is vice president of the sales agency and a member of its executive committee.

Mr. Broomfield's sunken gardens at his Beverly Hills home in California furnish cut flowers the year round for every office in his Los Angeles headquarters.

Fay Mitchell, of Nevada, Mo., is now manager of the Western Service Company at Moran, Kans.

* * *

John M. Lovejoy, president of the Seaboard Oil Corporation, was a recent visitor in Los Angeles.

* * *

C. P. Parsons, of the Halliburton Oil Well Cementing Company, Duncan, Okla., is in Houston, Tex., on business for his firm.

* * *

A. K. Barnes, of the Denver, Colo., office of the legal department of Stanolind Oil & Gas Company, is a visitor in the Mid-Continent.

* * *

R. E. Powell, general manager of the Baytown refinery of the Humble Oil & Refining Company, is reported convalescent from an attack of influenza.

* * *

G. W. Pritle, consulting geologist, Tyler, Tex., talked on "The Geology of the Michigan Basin," before the East Texas Geological Society at its last meeting.

* * *

M. F. Waters, president of Hanlon-Waters Company, is spending some time in Houston, Tex., where he is introducing some new products of the company.

* * *

A. McD. Gray, president of the Gray Processes Corporation, accompanied by Doctor Nisson, of Newark, N. J., are at present making a tour of the principal refineries of Europe.

* * *

E. L. Shea, president of the Tide Water Oil Company, New York, has just completed visits to the Associated Oil Company's offices in San Francisco, Calif., and to the Tide Water Oil Company's Mid-Continent offices.

* * *

D. W. Wise, who has been a scout in the Panhandle district of Texas for the Shell Petroleum Corporation, now represents that firm in the Seminole, Okla., district. W. S. Temples succeeded him at Amarillo, Tex.

* * *

Walker S. Clute, geologist and petroleum engineer of the State of California Tax Research Bureau, recently addressed the Los Angeles Petroleum Accountants Society on "Some Aspects of the Present Tax Situation in California."

* * *

William A. Knapp, formerly vice president of Butler Manufacturing Company, is now factory representative at Kansas City, Mo., for A. W. Wheaton Brass Works of Newark, N. J., and of Ralph N. Brodie Company of Oakland, Calif.

* * *

H. K. Browning, manager of oil field sales for the A. M. Byers Company, Pittsburgh, Pa., is spending some time in Houston, Tex., after which he will work through the Mid-Continent stopping at Bartlesville, Ponca City and Tulsa.

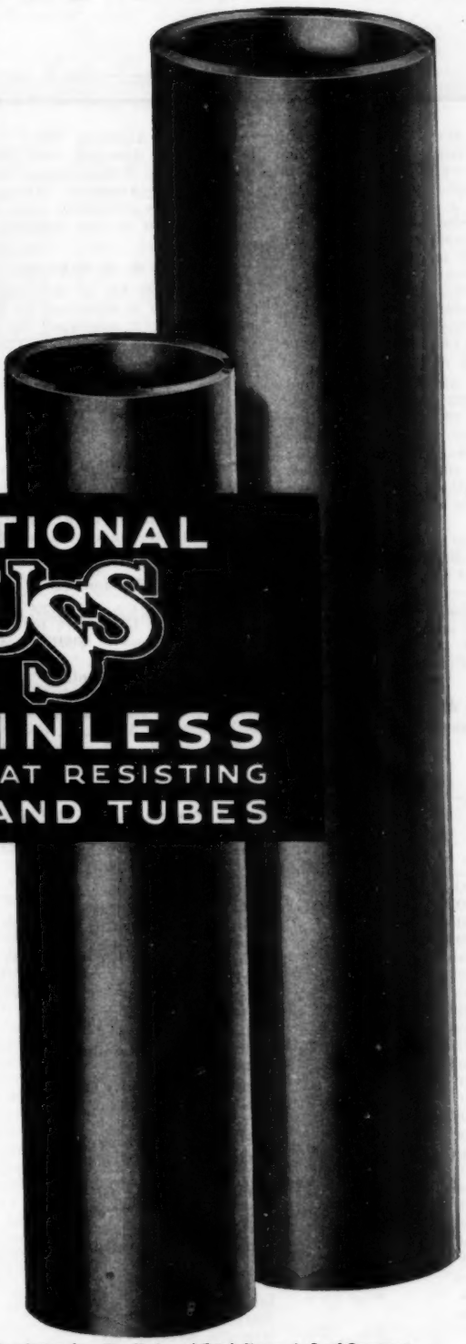
* * *

C. L. Moody, Ohio Oil Company, Shreveport, La., is the speaker for the meeting of the East Texas Geological Society scheduled for the evening of March 9. His subject will be "Some Cretaceous Problems of the Mississippi Embayment Area."

* * *

Effective March 1, the division offices of the Stanolind Oil & Gas Company for Montana, Wyoming and Colorado were established in Casper, Wyo. The Casper personnel is composed of C. D. Buffett, acting division superintendent; H. W. Ladd, assistant general superintendent in charge of equipment; Mrs. Enith Carlson, secretary; G. B. Jenkinson, Jr., division land man; J. G. Bartram, division geologist; J. R. McCurdy, assistant land man; Miss Virginia Fogg, secretary; Miss Flossie Davidson, secretary; J. R. Evans, district engineer; R. E. Fry, statistician; Miss Sally Newell, stenographer; A. G. Fidel, purchasing agent; and Mrs. Katherin Orwig, secretary.

Reducing the toll of CORROSION



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The Lorain Steel Company
Tennessee Coal, Iron & R. R. Company
Universal Atlas Cement Company

Pacific Coast Distributors—Columbia Steel Company, Russ Building, San Francisco, Calif. *Export Distributors*—United States Steel Products Company, 30 Church Street, New York, N. Y.

MARKET RECORD OF OIL SECURITIES

By A. E. Mockler

NEW YORK, Mar. 6—Net profit of the Atlantic Refining Co. and subsidiaries for 1932, while 45 per cent in excess of dividends paid during the year, represents a return of only 3 per cent on invested capital, it is emphasized in the annual report. Net profit for 1932 amounted to $3,918,021, as indicated by preliminary figures published some weeks ago. This was equal to $1.45 a share on 2,696,642 shares of capital stock. For 1931 the company reported net profit of $513,749 after inclusion of nonrecurring profit of $1,433,000.

Gallonage sales of the company and subsidiaries in 1932 were about 8 per cent less than in 1931. Gross operating income for the year was $81,634,430, or $13,621,000 less than in the preceding year. This decline, the report points out, "was more than offset by reduced cash operating charges in the amount of $16,368,000."

Current assets on December 31 were reported as $40,149,280, including $8,606,324 in cash and $1,116,280 in securities at market values. Current liabilities amounted to $5,204,248.

On December 31 surplus amounted to $61,144,504, made up of $50,694,874 earned surplus and $10,449,630 paid in surplus.

General American

At the annual meeting of directors of the General American Tank Car Corp. next month directors will recommend that the name of the company be changed to General American Transportation Corp., to more adequately cover the varying operations of the company and its subsidiaries.

S. O. of Nebraska

Standard Oil Co. of Nebraska reports that although it sustained an operating loss in 1932, it continued the payment of dividends out of surplus. The surplus account, as of December 31, shows a reduction of $390,875 after payment of $1.25 a share in dividends on the $25 par stock, of which 190,822 shares are outstanding. Assets at the close of 1932 were reported as follows: Plant, after depreciation, $3,388,179; merchandise, $1,010,557; cash, $519,936; accounts receivable, $337,630; and investments, $1,637,459. Liabilities were: Capital stock, $4,770,550; accounts payable, $256,363; and surplus, $1,866,848.

Houston Oil

Houston Oil Co. of Texas and Houston Pipe Line Co. report for 1932 consolidated net loss of $901,648 after depreciation, depletion, interest, taxes, leases expired, and other charges, as compared with net loss of $356,484 in 1931. Current assets as of December 31, 1932, including $1,511,881 cash, amounted to $2,988,062 and current liabilities were $851,373. This compares with cash of $1,432,800, current assets of $3,239,624 and current liabilities of $826,973 at the close of the previous year.

Imperial

Imperial Oil Co., Ltd., has declared a quarterly dividend of 12½ cents per share on its no-par coupon stock, payable March 1.

Union Oil

Union Oil Co. of California reports for 1932 net profit of $3,211,084, before dividends, compared with $3,054,912 in 1931. After dividends deficit amounted to $2,052,200, compared with $5,717,228 in 1931.

Standard of Kentucky

Standard Oil Co. of Kentucky has declared a quarterly dividend of 25 cents on the $10 par common stock, payable March 31 to holders of record March 15. This compares with 30 cents a share paid formerly.

Texaco

The Texas Corporation has declared the regular quarterly dividend of 25 cents per share, payable April 1, to stock of record March 3.

Pure Oil

Pure Oil Co. has reduced the dividends on the 8 per cent preferred stock from $2 to 50 cents a share; on the 6 per cent preferred from $1.50 to 37½ cents; and on the 5¼ per cent preferred shares the company declared a distribution of 37½ cents. Previously the company paid $1.50 in April and $1.25 in January, July and October on the 5¼ per cent issue. All disbursements are payable April 1 to stock of record March 10.

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb based on closing quotations for Wednesday, was as follows:

Sept. 7	18.50	Dec. 7	13.31
Sept. 14	15.90	Dec. 14	14.21
Sept. 21	16.72	Dec. 21	13.53
Sept. 28	15.55	Dec. 28	13.50
Oct. 5	14.44	Jan. 4	13.89
Oct. 11	14.31	Jan. 11	14.52
Oct. 19	14.37	Jan. 18	13.76
Oct. 26	14.43	Jan. 25	13.37
Nov. 2	13.99	Feb. 2	13.26
Nov. 9	14.36	Feb. 8	13.21
Nov. 16	15.15	Feb. 15	13.14
Nov. 23	14.61	Feb. 21	13.14
Nov. 30	14.04	Mar. 1	11.91

Phillips Petroleum

Phillips Petroleum Co. and subsidiaries report for the year ended December 31, 1932, net earnings of $775,766 after taxes, interest, inventory adjustment, depreciation, intangible drilling costs, etc.,

Independent Oils on New York Curb

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended Feb. 25)

Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1933 High	1933 Low	Week ended Feb. 25 Sales	Week ended Feb. 25 High	Week ended Feb. 25 Low	Close Mar. 1
American Maracaibo	(sh)	700,000	N.P.	....	.....	⅜	¼	600	⅜	¼	¼
Arkansas Natural Gas	(sh)	4,084,225	N.P.	....	.....	1⅝	1⅛	200	1½	1⅜	1⅛
Arkansas Natural Gas "A"	(sh)	3,522,521	N.P.	....	.....	2	1⅛	1,900	1¼	1⅛	1
Arkansas Natural Gas pfd.	(sh)	2,193,000	$10	....	4- 1-32	3¼	2	1,300	2¼	2	..
British American Oil Corp.	(sh)	2,622,642	N.P.	20cQ	3-14-33	7⅜	6⅛	No sales	..	..	..
Carib Syndicate		$131.250	25c	....	.....	⅜	¼	500	¼	¼	..
Cities Service	(sh)	36,979,065	N.P.	....	6- 1-32	3¼	2	46,300	2⅜	2	2⅛
Cities Service pfd.	(sh)	1,125,931	N.P.	....	6- 1-31	17½	12½	1,200	13¾	12½	12
Colombia Syndicate		3,250,000	N.P.	....	.....	..	..	No sales	..	..	..
Columbia Oil & Gasoline v.t.c.	(sh)	$2,000,000	$1	....	.....	1⅛	⅝	700	⅞	⅞	⅞
Colon Oil	(sh)	2,200,000	N.P.	....	.....	½	¼	No sales	..	..	..
Consolidated Royalty Oil Co.		$5,527,880	$10	5cQ	1-25-33	1¼	1	100	1⅛	1⅛	..
Cosden Oil	(sh)	323,950	N.P.	....	.....	1¾	⅞	300	1	⅞	..
Darby Petroleum	(sh)	609,696	N.P.	....	10-15-30	3⅛	2½	500	2½	2½	..
Derby Oil & Refining	(sh)	500,000	N.P.	....	.....	1¼	1	800	1	1	..
Derby Oil & Refining pfd.		48,500	N.P.	....	.....	..	..	No sales	..	..	..
Gulf Oil Corp.	(sh)	4,504,921	$25	....	10- 1-31	29¼	26	3,800	26¾	26	25⅜
Indian Terr. Illum. Oil "B"	(sh)	7,090,037	N.P.	....	.....	1½	1¼	No sales	..	..	..
Intercontinental Petroleum		$5,682,000	$5	....	.....	⅛	⅛	1,200	⅛	⅛	..
Kirby Petroleum	(sh)	750,000	N.P.	....	.....	¾	⅝	No sales	..	..	..
Leonard Oil & Development		$50,000,000	$25	....	.....	⅛	⅛	No sales	..	..	..
La. Land & Exp.	(sh)	3,000,000	N.P.	....	.....	⅞	⅝	200	¾	¾	..
Lion Oil & Refining	(sh)	250,000	N.P.	....	10-27-30	2¼	1½	No sales	..	..	..
Lone Star Gas	(sh)	5,000,000	N.P.	16cQ‡	3-31-33	7⅝	6¼	1,900	7	6¼	5⅞
Margay Oil Corp.		160,000	N.P.	25cQ	1-10-33	6½	6	No sales	..	..	..
Memphis Natural Gas	(sh)	920,000	N.P.	....	4-15-32	3⅜	2⅜	600	2½	2⅜	2¼
Mexico-Ohio Oil Co.		500,000	N.P.	....	.....	2	2	100	2	2	..
Mountain & Gulf		$4,000,000	$1	....	4-15-31	¼	¼	300	¼	¼	..
Mountain Producers		$1,682,182	$10	20cQ	1- 3-33	3⅜	2½	300	2⅞	2¾	2⅞
National Fuel Gas	(sh)	3,810,183	N.P.	25cQ	1-16-33	13¼	11⅛	2,200	11⅞	11⅛	10¼
New Bradford Oil		$7,224,186	$5	....	4-15-31	⅞	½	1,600	⅞	⅝	⅞
New Mexico and Arizona		$1,000,000	$1	....	.....	⅞	½	1,700	⅝	½	..
North Central Texas	(sh)	262,446	$5	....	9- 2-30	¾	¾	No sales	..	..	..
North European Oil	(sh)	1,372,391	N.P.	....	.....	⅜	⅛	100	¼	¼	..
Pacific Western Oil	(sh)	1,000,000	N.P.	....	.....	..	..	No sales	..	..	..
Pantepec Oil	(sh)	1,595,500	N.P.	....	.....	⅛	⅛	No sales	..	..	..
Reiter-Foster	(sh)	388,584	N.P.	....	12- 2-29	..	..	No sales	..	..	..
Richfield Oil pfd. x.w.	(sh)	399,950	$25	....	.....	¼	¼	No sales	..	..	..
Ryan Consolidated	(sh)	296,931	N.P.	..	.....	¾	⅝	No sales	..	..	..
Salt Creek Consolidated	(sh)	1,286,300	$10	....	4- 1-31	½	⅜	2,700	⅜	⅜	⅜
Salt Creek Producers	(sh)	1,496,859	$10	25c	2- 1-33	4½	3½	1,000	3¾	3½	..
Sunray Oil	(sh)	1,163,185	$5	....	4-15-31	⅜	⅛	3,400	⅜	¼	..
Texon Oil & Land	(sh)	936,036	N.P.	25c†	12-30-32	8	6⅝	100	7½	7½	7⅛
Venezuelan Petroleum	(sh)	755,090	$5	....	2-15-30	¼	⅛	100	⅛	⅛	..
Woodley Petroleum		$500,000	$1	....	3-31-29	2⅛	2	No sales	..	..	..

Stocks—	1930 High	1930 Low	1931 High	1931 Low	1932 High	1932 Low
American Maracaibo	4½	½	1¾	¼	¾	¼
Arkansas Natural Gas	16¾	4⅝	6½	1⅞	3¾	¾
Arkansas Natural Gas "A"	16⅝	4⅝	6¾	1⅞	3⅜	½
Arkansas Natural Gas pfd.	8⅛	6¼	7	3⅞	5⅝	1½
British American Oil Corp.	23	13⅜	16⅞	6¼	9¾	6¾
Carib Syndicate	2¾	⅝	2⅜	¼	¾	¼
Cities Service	44¼	13	20¾	5	6⅞	1¼
Cities Service pfd.	93⅞	78¼	84¾	35⅝	53⅜	10
Colombia Syndicate	21	3⅜	7⅛	1	¼	⅛
Columbia Oil & Gasoline v.t.c.	¾	⅛	½	⅛	2⅛	½
Colon Oil	8¼	1⅛	3⅛	¼	1¼	¼
Consolidated Royalty Oil Co.	5⅞	2	2⅜	1	2	1
Cosden Oil	74¾	1¼	3¾	⅜	2⅞	¼
Darby Petroleum	21¾	4¼	5	1¾	7⅛	1⅝
Derby Oil & Refining	11	2	6	1½	3	1
Derby Oil & Refining pfd.	60	30	40½	25	24½	10½
Gulf Oil Corp.	166⅞	58½	75½	25⅜	44¾	23
Indian Terr. Illum. Oil "B"	53½	12⅝	16⅞	5	4½	1½
Intercontinental Petroleum	1¾	⅜	⅝	⅛	¼	⅛
Kirby Petroleum	3	⅞	1⅞	¼	1	⅜
Leonard Oil & Development	5	¾	2	½	¾	⅛
La. Land & Exp.	4¾	½	1½	¼	2½	½
Lion Oil & Refining	29	4⅞	6¾	1½	3½	⅞
Lone Star Gas	55⅞	19⅝	25	5½	11	3⅜
Margay Oil Corp.	16	⅜	5	1⅞	8	3¾
Memphis Natural Gas	22¼	7½	12⅛	4½	5¼	1⅝
Mexico-Ohio Oil Co.	7½	1¾	4⅞	1½	3⅜	1½
Mountain & Gulf	¾	⅜	½	⅛	⅜	⅛
Mountain Producers	12⅛	3¾	5⅞	2	4¾	2⅛
National Fuel Gas	41⅜	19⅜	26½	9¾	14⅝	8
New Bradford Oil	3½	1¼	1½	½	⅞	⅜
New Mexico and Arizona	7¼	1½	3	¾	1¼	⅜
North Central Texas	11¼	2⅛	3¼	⅝	1½	⅝
North European Oil	6¼	⅝	2⅛	¼	⅜	⅛
Pacific Western Oil	19½	5½	15	2⅞	8	3
Pantepec Oil	4⅜	⅞	2	⅜	⅝	⅛
Reiter-Foster	5⅜	1	3⅛	¼	½	⅛
Richfield Oil pfd. x.w.	23½	6½	11	¼	1	⅛
Ryan Consolidated	8⅝	2	3	¾	2⅛	⅝
Salt Creek Consolidated	2½	½	1⅜	⅛	⅞	⅛
Salt Creek Producers	15¼	5¼	7¾	2¾	5½	2⅞
Sunray Oil	10	2	5¼	¼	⅝	¼
Texon Oil & Land	19½	8	12⅞	2½	10½	4½
Venezuelan Petroleum	4¼	⅜	1⅞	¼	⅛	⅛
Woodley Petroleum	5	½	3½	1⅛	2⅜	1⅛

*Ex-dividend. †Plus extra dividend of 25 cents. ‡Payable in stock. §Paid in lieu of regular cash dividend of 2 per cent.

equivalent to 18 cents per share earned on 4,153,104 shares of no-par capital stock outstanding. This compares with net income of $5,576,409 in 1931.

Total income for 1932 was $62,729,016, an increase of 9.3 per cent from 1931, and the highest in the company's history. Net operating income of $19,233,777 before inventory adjustment was 29.7 per cent higher than in the previous year and was also a record high for the company. This cash income enabled the company to substantially reduce indebtedness and to make important improvements and extension of facilities. Inventory adjustment represented a write-down of $621,192.

Working capital increased more than $7,000,000, with the current ratio 2.2 against 1.32 at the end of 1931. Investment in plant additions in 1932 totaled $9,948,000 and bonded debt was reduced $2,462,000. Current assets on December 31 were $24,683,555, including cash and marketable securities of $7,130,433, compared with cash and securities of $5,295,611 and current assets of $24,678,756 at the close of 1931. Current liabilities were reduced to $11,103,845 from $18,768,209.

South Penn

South Penn Oil Co. has declared the regular quarterly dividend of 25 cents per share, payable March 31 to stock of record March 15.

Standard Oil Stocks on New York Curb

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended Feb. 25)

1933 High	1933 Low	Week ended Feb. 25 Sales	Week ended Feb. 25 High	Week ended Feb. 25 Low	Close Mar. 1	Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1930 High	1930 Low	1931 High	1931 Low	1932 High	1932 Low
6	6	50	6	6	..	Borne Scrymser		$1,000,000	$25	....	10-15-30	25	11¼	16	6	7	6
27	25	100	25	25	..	Buckeye Pipe Line		$10,000,000	$50	75cQ	3-15-33	69	39⅞	56	30	35	17½
90	85	300	85½	85	..	Chesebrough Mfg.		$3,000,000	$25	$1Q‡	3-31-33	184⅞	104¼	129½	75	90	53
2⅞	2⅝	7,400	2⅞	2⅝	2⅝	Creole Petroleum	(sh)	5,977,872	N.P.	....	.....	7⅞	3	3⅞	1⅝	3⅛	1⅜
28½	24	50	24	24	..	Eureka Pipe Line		$5,000,000	$100	$1Q	2- 1-33	54¾	26	36	19	35	18
45	40⅞	1,000	43⅝	42	40⅞	Humble Oil & Refining		$74,103,300	$25	50cQ	4- 1-33	119	57¼	72	44¼	55	35⅝
8¼	6⅝	1,000	6¾	6⅝	6¾	Imperial Oil of Canada	(sh)	26,557,496	N.P.	12½cQ	3- 1-33	30	15	18¼	7⅜	10⅞	6¼
4	3⅛	400	3⅜	3⅛	..	Indiana Pipe Line		$3,000,000	$10	10cS.A.§	11-15-32	41	14½	21⅛	5½	7½	2⅜
10⅞	8⅞	4,900	10	9⅜	9¼	International Petroleum	(sh)	14,247,088	N.P.	25cQ	3-15-33	24	11⅜	15½	7⅝	12¼	8
7⅝	6⅜	300	6½	6⅜	..	National Transit		$6,362,500	$12.50	20cQ	12-15-32	22⅜	11½	17½	5	10½	6
5⅞	5	No sales	..	..	..	Northern Pipe Line		$1,200,000	$10	25c	1- 2-33	54	26¼	35½	20	5½	3⅛
12	11	200	11⅜	11⅜	11	South Penn Oil		$30,000,000	$25	25cQ	12-30-32	45⅞	16¼	23⅞	9¼	16½	9⅝
3½	3	No sales	..	..	..	Southern Pipe Line		$1,000,000	$10	10cQ	3- 1-33	20⅞	8⅜	17	7	10	3⅜
33	29	No sales	..	..	..	Southwest Pennsylvania Pipe Line		$1,750,000	$50	$1Q	12-31-32	64	32	42½	25	37	27
22⅛	18⅜	31,500	19¾	18⅜	17½	Standard Oil of Indiana		$424,914,895	$25	25cQ	3-15-33	59⅞	30	38½	13½	25⅛	13⅛
11¼	9½	2,500	10⅜	10	9½	Standard Oil of Kentucky		$25,654,516	$10	30cQ	12-31-32	40½	18⅝	23⅝	12½	15⅞	8⅞
14¼	13¾	No sales	..	..	..	Standard Oil of Nebraska		$4,770,550	$25	25cQ	3-20-33	48⅞	34⅝	36½	16	19	10¼
21	16	50	17½	17½	16	Standard Oil of Ohio		$18,811,675	$25	37½cQ	1- 3-33	108½	43¼	62½	23	30⅛	15½
1⅛	1	No sales	..	..	..	Swan-Finch Co.	(sh)	34,480	$25	....	1-15-29	10	4	4½	1	2	1⅝

*Ex-dividend. †Unit of trading less than 100 shares. ‡Plus $1 extra. §Plus 5 cents extra.

Transactions in Oil Shares on New York Stock Exchange

Quotations Compiled by Francis, Bro. & Co., Members of the New York Stock Exchange and Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended Feb. 25)

1933 High	1933 Low	Week ended Feb. 25 Sales	Week ended Feb. 25 High	Week ended Feb. 25 Low	Close Mar. 1	Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1930 High	1930 Low	1931 High	1931 Low	1932 High	1932 Low
22	19¼	2,700	20½	19¼	19⅜	Amerada Corp.	(sh)	844,200	N.P.	50cQ	1-31-33	31½	16½	23	11¼	22¾	12
16	14¾	100	15	14¾	14	Associated Oil		$44,356,180	$15	25cQ	3-31-33	51	30	31	8¾	16½	6½
17¼	13⅝	8,400	15½	13⅝	13¾	Atlantic Refining		$67,416,050	$25	25cQ	3-15-33	51⅜	16⅝	23⅝	8⅝	21⅞	8⅝
4¼	3⅜	8,700	3⅝	3⅜	3½	Barnsdall Corp.		$11,293,895	$5	....	5-11-31	34	8⅝	14½	4	7	3⅜
17¾	10½	37,600	13½	10½	11⅛	Columbia Gas & El.	(sh)	11,684,220	N.P.	25cQ§	2-15-33	87	30⅝	45⅝	11⅝	21	4¼
12	10½	1,000	10¾	10½	..	Colonial Beacon Oil	(sh)	1,444,970	N.P.	....	12-22-22	20⅜	8⅞	10½	7½	12½	9
6⅛	5⅛	43,200	5⅞	5½	5⅜	Consolidated Oil Corp.	(sh)	14,218,835	N.P.	....	.....	..	..	..	..	9	4
6¼	5⅛	13,000	5⅜	5⅛	5⅛	Continental Oil of Delaware	(sh)	4,738,594	N.P.	....	12-15-27	30½	7⅜	12	9	9⅜	3⅝
19⅜	14½	8,200	16½	14½	14⅞	General American Tank Car	(sh)	751,638	N.P.	25cQ	1- 2-33	111⅞	53⅛	73⅛	28	35¾	9½
7⅞	5	3,300	6	5	4⅜	General Asphalt	(sh)	413,333	N.P.	....	6-15-32	71½	22⅜	47	9⅝	15½	4⅜
15¾	10	700	12	10	9	Houston Oil		$24,968,600	$100	....	10-17-30	116⅞	29¼	68½	15¾	28¼	8¾
2	1¼	400	1¼	1¼	..	Indian Refining		$12,564,070	$10	....	10- 1-30	17	2	4⅝	1⅛	2¾	1
1	⅝	200	⅝	⅝	..	Louisiana Oil Refining	(sh)	1,309,069	N.P.	....	.....	12	3½	4½	1	2¼	½
⅝	½	No sales	..	..	..	Maracaibo Oil	(sh)	330,000	N.P.	....	.....	10⅜	1⅜	3¾	½	1½	⅜
4⅞	4⅛	2,300	4⅜	4⅛	4	Mid-Continent Petroleum	(sh)	1,857,912	N.P.	....	2-16-31	32	11	16¾	5	8⅞	3¾
6¼	5½	No sales	..	..	..	National Supply of Delaware	(sh)	390,879	$50	....	5-15-31	124¾	60	70¼	5	13	3½
7⅛	5½	4,200	6⅛	5½	5⅝	Ohio Oil	(sh)	6,648,052	N.P.	....	12-15-32	32	16	19½	5⅛	11	5
12½	12	No sales	..	..	..	Pan American P. & T.	(sh)	1,000,000	$5	10cQ	3-15-33	46½	42	35⅛	20	14	6
12½	12	No sales	..	..	12	Pan American P. & T. "B"	(sh)	2,474,288	$5	10cQ	3-15-33	67¼	30	36½	18	14½	7¼
1⅛	½	400	1⅛	1	..	Panhandle P. & R.	(sh)	199,370	N.P.	....	.....	12¾	1¾	4¼	⅝	1¾	¼
6	4¾	6,200	5⅝	5¼	5⅛	Phillips Petroleum	(sh)	4,156,908	N.P.	....	1- 2-31	44⅝	11½	16⅝	4	8⅛	2
⅜	¼	900	⅜	¼	..	Pierce Oil Corp.		$29,622,831	$25	....	.....	2½	½	1½	⅛	¾	¼
1	⅝	300	⅞	¾	¾	Pierce Petroleum	(sh)	2,500,000	N.P.	....	2-16-31	7⅛	1⅛	3⅜	½	1⅝	½
9½	6¾	2,500	7¼	6¾	7⅛	Plymouth Oil Co.	(sh)	1,050,000	$5	75cA	.....	..	..	..	..	12½	8½
6	6	No sales	..	..	..	Prairie Oil & Gas		$61,035,800	$25	....	3-31-31	54	11¼	20⅜	4⅛	9½	3½
8⅛	7¼	100	7⅞	7⅞	..	Prairie Pipe Line		$101,250,000	$25	....	6-30-31	60	16⅝	26½	5⅞	12¼	5½
⅜	¼	900	¼	¼	..	Producers & Refiners		$37,438,950	$50	..	9-15-23	11⅞	1	6	1	1⅝	⅛
5	3	20	3½	3	..	Producers & Refiners pfd.		$2,845,350	$50	....	5- 4-25	40	11½	16	3	9¾	1
3⅞	3	5,800	3¼	3	3	Pure Oil		$75,959,250	$25	....	9- 1-30	27¼	7⅝	11⅞	3¼	6½	2⅛
½	¼	200	¼	¼	⅜	Richfield Oil (new)		$52,410,875	N.P.	....	.....	9¾	4⅛	6⅜	⅜	1⅜	¼
21⅝	17¾	1,400	19⅛	17¾	..	Royal Dutch N. Y.	(sh)	611,303	....	80⅓cf	8- 5-32	56½	36⅞	42⅝	13	23¾	12⅛
20¼	15	8,300	18	16½	16¼	Seaboard Oil of Delaware	(sh)	1,244,383	$4	10cQ	12-15-32	37	9¾	20¾	5½	20⅜	6⅝
18	13⅛	10	13¼	13⅛	..	Shell Transport & Trading Co.		£23,985,000	£1	53cf	7-22-32	48⅜	26	34	5	16⅜	8
5⅝	4	6,800	4⅝	4	4⅛	Shell Union Oil	(sh)	13,066,497	N.P.	....	6-30-30	25½	5¼	10¼	2½	8¾	2½
44½	30	500	36	30	..	Shell Union Oil pfd.	(sh)	400,000	$100	....	7- 1-31	106¼	55	78	15	65¼	18
6¼	5	1,100	6½	5	4⅞	Simms Petroleum	(sh)	600,000	$20	25cQ	1-16-32	37	5⅝	11	3½	7½	3¼
3¾	3	700	3⅛	3	3	Skelly Oil		$27,441,250	$25	....	12-15-30	12	10⅛	12⅞	2	5⅝	2½
25½	23	No sales	..	..	22	Skelly Oil pfd.	(sh)	119,800	$100	....	5- 1-31	99¾	42	62	10	33½	12
7⅞	6¼	21,700	6¾	6⅜	6⅜	Socony-Vacuum		$793,613,588	$25	10cQ	3-15-33	106⅜	98	106	87⅛	12¼	5¼
101	94	1,100	99½	94	94	Standard Oil Export pfd.	(sh)	764,885	$100	$2.50SA.	12-31-32	..	..	21	8⅜	100½	81
26	20⅛	17,300	22½	20⅛	20¾	Standard Oil of California	(sh)	13,102,900	N.P.	50cQ	3-15-33	75	42½	51¾	23⅛	31⅞	15⅛
17⅝	15	5,600	17	16¼	16	Standard Oil of Kansas		$8,000,000	$25	....	3-16-31	49	14⅜	19	7¾	16½	7
31⅜	23½	36,300	24⅝	23½	23⅜	Standard Oil of New Jersey		$637,961,700	$25	25cQ	3-15-33	84⅞	32½	52½	26	37⅜	19⅞
37	35	800	36	35	35½	Sun Oil	(sh)	1,416,869	N.P.	25cQ	3-15-33	70	39	45¼	26¾	39⅞	24⅜
1¾	¾	1,600	1⅜	1⅛	1⅛	Superior Oil Corp.	(sh)	766,979	N.P.	....	12-20-30	9⅜	¾	1⅜	¼	2	¼
14⅛	11⅛	17,600	12⅜	11⅛	11⅞	The Texas Corporation		$246,204,900	$25	25cQ	4- 1-33	60½	28¼	36¼	9⅞	18¼	9¼
1⅞	1½	500	1½	1½	1⅝	Texas Pacific Coal & Oil Co.		$9,304,890	$10	....	12-31-29	14½	4	6½	1⅞	4	1½
..	..	No sales	..	..	..	Tide Water Oil	(sh)	2,191,823	N.P.	25cQ	3-31-33	31	13	18	9⅞	10	5
50	45	100	49	49	..	Tide Water Oil pfd.	(sh)	199,446	N.P.	$1.25Q	2-15-33	94⅞	71	83	30	62	30
4	3⅛	7,300	3½	3⅜	3½	Tide Water Associated	(sh)	5,560,424	N.P.	....	2-16-31	17¾	5⅞	9	2⅛	5⅝	2
44⅛	40	300	41	40	38	Tide Water Associated pfd.		$73,284,500	....	$1.50Q	1- 1-33	89¾	55	68	20½	60	20
11⅝	9½	3,800	9⅞	9½	9¼	Union Oil of California		$109,651,750	$25	25cQ	2-10-33	50	10⅛	26⅝	11	15⅜	8
12⅞	10½	200	11	10½	..	Union Tank Car	(sh)	1,254,048	N.P.	35cQ	3- 1-33	38½	23	25⅛	16	19¼	11¾
1½	¾	800	1	¾	..	Warner-Quinlan	(sh)	632,948	N.P.	....	7- 1-30	27	4¼	7⅜	⅞	2¼	½
3	2⅝	300	2⅞	2⅞	2⅝	Wilcox Oil & Gas	(sh)	428,967	$5	...	5-10-28	21	6½	9⅜	2¼	8¾	2¼

*Ex-dividend. †Interim dividend for 1931. §Payable in 5% convertible preferred stock. A—Paid this year; no regular rate.

In comparing highs and lows for the several years in the three tables, it will be necessary to take into consideration cases where there have been stock split-ups.

Oklahoma-Kansas and Eastern Monthly Pipe Line Report

OKLAHOMA-KANSAS
Pipe Line Statement for December

Runs

Company—	Month (bbls.)	Dy av. (bbls.)
Gulf Pipe Line Co.	1,215,586	39,212
Texas Pipe Line Co.	575,329	18,559
Empire P. L. Co.	1,546,444	49,885
Magnolia P. L. Co.	926,990	29,903
Cosden P. L. Co.	585,437	18,886
Stanolind P. L. Co.	2,485,100	80,100
Oklahoma P. L. Co.	1,853,312	59,784
Other lines	5,228,770	168,670
Total December	14,414,968	464,999
Total November	14,182,686	477,916
Difference	232,282	12,916

Shipments

Gulf Pipe Line Co.	1,525,153	49,199
Texas Pipe Line Co.	683,439	22,046
Empire Pipe Line Co.	1,770,121	57,101
Magnolia P. L. Co.	962,125	31,036
Cosden P. L. Co.	624,873	20,157
Stanolind P. L. Co.	3,349,333	108,043
Oklahoma P. L. Co.	1,709,737	55,153
Other lines	5,642,000	182,000
Total December	16,266,785	524,735
Total November	16,482,660	549,422
Difference	215,875	4,687

Stocks

Sinclair Prairie Oil & Gas Co.*	33,372,000
Gulf P. L. and Gypsy Oil Co.	6,291,266
The Texas Company	2,584,036
Empire Pipe Line Co.	4,387,146
Mid-Continent Petroleum Corp.	2,256,287
Stanolind Crude Oil Pur. Co.*	14,737,000
Magnolia Petroleum Co.	7,515,564
Oklahoma Pipe Line Co.	1,302,567
Carter Oil Co.	3,202,433
Other lines	16,819,796
Total December	92,248,115
Total November	93,098,415
Difference	850,300

*Estimated. Stanolind Pipe Line Co. shipments include Texas crude oil.

EASTERN PIPE LINE REPORT FOR MONTH OF JANUARY
RUNS FROM WELLS

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky, Illinois, Indiana and Michigan for December and January:

	Dec., '32	Jan., '33
Nat. Transit	184,343.57	219,447.33
S W Pa. P. L.	59,123.56	59,106.41
Eureka P. L.	234,047.52	232,631.15
Buckeye P. L. (Macksburg)	226,254.81	221,734.49
Buckeye P. L. (Cleveland)	9,844.83	9,792.91
Buckeye P. L. (Lima, etc.)	83,132.28	77,464.09
Indiana P. L.	1,481.00	1,000.75
Stoll Oil Ref.	24,349.76	23,390.97
Bradford Trans.	336,033.77	377,801.00
Ashland Ref.	116,035.81	.....
N. Y. Transit	31,542.65	31,244.16
Tide Water P. L.	20,344.56	24,632.69
Pure Oil	417,450.47	364,453.24
Wolverine	.....	7,720.92
D'gherty Ref.	.....	938.00
Valvoline Oil	.....	66,597.05
Other companies	.....	158,770.24
Total	1,779,444.64	1,875,715.30
Daily average	57,401.44	60,506.94

PETROLEUM DELIVERIES

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for December and January:

	Dec., '32	Jan., '33
Nat. Transit	564,142.80	540,616.83
S W Pa. P. L.	433,433.83	412,622.32
Eureka P. L.	176,061.90	204,317.90
Buckeye P. L. (Macksburg)	283,296.40	301,525.13
Buckeye P. L. (Cleveland)	1,703.70	1,461.72
Buckeye P. L. (Lima, etc.)	1,283,479.91	1,286,405.35
Indiana P. L.	1,044,961.84	923,543.81
Bradford Trans.	395,061.80	444,520.05
Southern P. L.	45,636.81	48,129.32
Tuscarora	272,595.24	268,410.59
N. Y. Transit	181,237.45	186,221.84
Northern P. L.	187,906.61	179,691.14
Tide Water P. L.	406,183.32	454,239.61
Pure Oil	544,478.14	535,990.35
Valvoline Pipe	.....	61,283.50
Other companies	.....	154,205.16
Total	5,770,185.75	6,168,854.67
Daily average	186,135.02	198,996.28

GROSS STOCKS

The gross stocks held by various pipe lines in the oil-producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of December and January:

	Dec., '32	Jan., '33
Nat. Transit	576,760.76	603,963.33
S W Pa. P. L.	305,813.08	317,495.45
Eureka P. L.	1,010,482.31	1,003,236.10
Buckeye P. L. (Macksburg)	281,126.12	280,624.72
Buckeye P. L. (Cleveland)	62,884.73	46,043.03
Buckeye P. L. (Lima, etc.)	2,553,050.19	2,466,700.56
Indiana P. L.	507,273.67	436,146.50
Bradford Trans.	295,545.38	253,210.49
Southern P. L.	187,747.67	158,404.30
Tuscarora	9,428.35	9,273.96
N. Y. Transit	93,921.48	94,205.81
Northern P. L.	211,546.14	232,037.48
Tide Water P. L.	545,246.63	1,048,059.40
Pure Oil	495,593.73	385,291.73
Valvoline Pipe	.....	92,779.10
Other companies	.....	175,678.68
Total	7,139,420.18	7,603,270.69
Increase	23,320.13	463,850.51

GRADES OF OIL

The following table shows the amount of the different grades of oil held by Eastern pipe lines at the close of December and January, showing gross stocks of the above fields:

	Dec., '32	Jan., '33
Pennsylvania	2,657,394.45	3,241,361.02
Lima	428,904.35	444,741.27
Mid-Continent	3,639,356.06	3,631,336.58
Illinois	2,134.17	1,834.13
Michigan	411,629.15	283,997.70
Total	7,139,420.18	7,603,270.69

DAILY AVERAGE RUNS

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1930	1931	1932	1933
Jan.	75,907	53,939	53,501	60,506
Feb.	79,256	55,163	55,498	.....
Mar.	76,688	54,331	57,199	.....
Apr.	84,536	54,914	57,348	.....
May	76,546	53,344	59,105	.....
June	75,480	54,110	64,371	.....
July	64,921	50,732	62,402	.....
Aug.	54,291	51,503	57,676	.....
Sept.	56,595	61,345	65,423	.....
Oct.	58,179	65,595	65,960	.....
Nov.	52,333	59,819	60,602	.....
Dec.	53,999	61,835	57,401	.....

DAILY AVERAGE SHIPMENTS

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1930	1931	1932	1933
Jan.	217,622	176,269	186,551	198,996
Feb.	224,355	183,494	169,556	.....
Mar.	223,846	189,508	188,793	.....
Apr.	241,845	191,450	202,036	.....
May	248,383	199,247	201,404	.....
June	234,401	231,155	201,622	.....
July	207,094	211,632	202,859	.....
Aug.	205,506	224,166	187,839	.....
Sept.	193,999	217,537	170,524	.....
Oct.	157,675	210,331	185,504	.....
Nov.	146,638	196,425	139,626	.....
Dec.	143,001	176,241	186,135	.....

GROSS STOCKS

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1931	1932	1933
Jan.	11,831,092	9,023,914	7,603,270
Feb.	11,506,489	8,974,350	.....
Mar.	11,012,162	8,802,192	.....
Apr.	11,044,481	8,908,461	.....
May	10,725,239	8,835,726	.....
June	9,903,349	8,732,724	.....
July	9,569,849	8,176,956	.....
Aug.	9,192,457	8,128,576	.....
Sept.	8,492,431	7,895,421	.....
Oct.	8,417,694	7,421,620	.....
Nov.	8,830,286	7,116,200	.....
Dec.	9,119,032	7,139,420	.....

THE ILLINOIS FIELD

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

	Bbls.
Gross stocks, Feb. 1	532,901.99
Runs from wells	319,422.15
Other receipts	53,705.13
Regular deliveries	288,966.34
Other deliveries	66,749.33

The amount of Illinois oil run by the Tide Water Pipe Co. in January was 24,632.69 bbls. Deliveries were 25,142.09 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1933:	Runs	Deliveries
January	344,054.84	314,108.93
1932:		
January	500,177.12	246,634.10
February	482,561.50	186,010.30
March	565,538.70	270,617.75
April	461,920.92	285,817.58
May	521,334.64	279,859.53
June	501,878.26	263,703.70
July	466,635.89	284,537.18
August	476,095.53	307,325.89
September	436,529.00	329,394.33
October	332,680.67	352,620.34
November	346,330.27	338,351.33
December	336,072.57	317,749.43

Tide Water Pipe Co., Ltd., also delivered in January 93,106.93 bbls. Oklahoma oil.

Average Daily Imports of Crude and Refined Oil at Principal United States Ports

Average barrels per day in 1932—	Atlantic Ports: Baltimore	Boston	New York	Philadelphia	Others	Total	Gulf Coast Ports: Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total all ports
January	19,161	8,161	104,065	24,194	34,903	190,484	4,871	7,226	2,096	1,484	15,677	206,161
February	33,483	16,517	128,483	38,862	34,552	249,897	2,034	5,207	4,310	1,379	12,930	262,827
March	25,806	10,516	167,806	38,677	48,129	290,935	5,936	29,774	.....	1,516	47,226	338,161
April	37,167	18,467	158,333	33,733	39,400	292,000	6,767	44,600	2,167	3,333	54,867	346,867
May	31,161	2,065	170,226	50,774	14,935	269,161	903	710	4,194	1,516	7,323	276,484
June	30,900	11,700	199,300	32,733	29,900	304,533	.....	.....	12,867	.....	12,867	307,400
July	2,613	2,161	62,968	14,935	2,129	84,806	.....	.....	.....	.....	.....	84,806
August	3,323	2,161	72,678	25,613	2,098	105,871	.....	.....	.....	.....	.....	105,871
September	5,100	2,300	57,900	12,167	10,066	87,433	.....	.....	.....	.....	.....	87,433
October	14,033	.....	72,193	30,645	7,129	124,000	.....	.....	.....	.....	2,000	126,000
November	14,167	.....	49,967	19,233	3,900	92,267	.....	.....	.....	.....	2,133	94,400
December	14,258	2,065	84,323	28,162	9,256	138,064	.....	.....	.....	.....	5,226	143,290

Average Daily Receipts of California Crude and Refined Oil at Atlantic and Gulf Ports

Average barrels per day in 1932—	Atlantic Ports: Baltimore	Boston	New York	Philadelphia	Others	Total	Gulf Coast Ports: Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total all ports
January	3,871	1,710	14,483	3,774	5,710	29,548	.....	.....	.....	.....	.....	29,548
February	3,069	.....	9,103	4,862	.....	17,034	.....	.....	.....	.....	2,483	19,517
March	1,516	.....	6,065	.....	.....	7,581	.....	.....	.....	.....	.....	7,581
April	3,500	.....	19,333	3,867	4,833	31,533	.....	.....	.....	.....	.....	31,533
May	2,161	.....	15,226	18,774	3,871	40,032	.....	.....	.....	.....	.....	40,032
June	2,500	.....	17,333	3,933	833	24,600	.....	.....	.....	.....	.....	24,600
July	2,323	.....	22,226	9,677	8,935	42,161	.....	.....	.....	.....	.....	42,161
August	4,452	.....	22,484	7,548	7,677	42,161	.....	.....	.....	.....	.....	42,161
September	2,900	.....	5,000	11,633	7,967	27,500	.....	.....	.....	.....	.....	27,500
October	2,387	1,226	14,452	9,355	9,193	36,613	.....	.....	.....	.....	.....	36,613
November	4,667	.....	21,700	7,767	3,366	36,500	.....	.....	.....	.....	.....	36,500
December	4,129	.....	15,678	6,322	8,226	33,355	.....	.....	.....	.....	4,903	38,258

Gross Production of Crude Oil in the United States for 12 Months

(In barrels of 42 gallons)

		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
January:	Month	15,532,141	13,644,149	26,409,838	3,170,587	1,101,616	1,792,398	2,444,164	3,649,000	67,763,893
	Daily average	501,037	440,779	851,930	102,277	35,536	57,819	78,844	117,709	2,185,927
February:	Month	14,616,863	11,806,150	23,858,375	2,838,839	1,008,563	1,617,087	2,420,224	3,374,000	61,540,140
	Daily average	504,020	407,110	822,703	97,891	34,778	55,762	83,456	116,345	2,122,074
March:	Month	15,575,915	12,998,796	26,163,647	3,042,929	1,062,897	1,703,144	2,617,392	3,643,000	66,806,720
	Daily average	502,449	419,316	813,956	98,159	34,287	54,942	84,433	117,516	2,155,056
April:	Month	15,524,444	13,718,030	26,362,851	2,974,080	1,048,620	1,858,957	2,525,040	3,766,000	66,778,013
	Daily average	517,481	423,934	878,762	99,136	34,954	61,965	84,168	125,533	2,225,934
May:	Month	15,575,741	13,169,420	27,328,472	3,038,930	1,064,602	2,012,701	2,600,523	3,891,000	68,681,549
	Daily average	502,443	424,820	881,564	98,030	34,342	64,926	83,893	125,516	2,215,554
June:	Month	14,118,970	12,757,230	26,161,092	2,837,179	1,022,970	1,857,433	2,416,630	3,577,000	64,748,554
	Daily average	470,632	425,241	872,036	94,573	34,099	61,914	80,556	119,233	2,158,285
July:	Month	14,627,550	13,030,571	26,946,714	2,906,803	1,060,336	1,933,757	2,554,648	3,723,000	66,783,434
	Daily average	471,856	420,341	869,248	93,768	34,206	62,379	82,408	120,097	2,154,304
August:	Month	14,839,951	13,743,686	26,924,953	3,046,959	1,062,897	1,870,764	2,413,536	3,873,000	66,775,726
	Daily average	478,708	411,086	868,547	98,289	34,287	60,347	77,856	124,935	2,154,056
September:	Month	14,351,140	11,705,280	27,366,515	2,970,750	1,019,250	1,929,161	2,289,300	3,618,000	65,249,396
	Daily average	478,371	390,176	912,217	99,024	33,975	64,305	76,310	120,599	2,174,980
October:	Month	14,627,663	11,915,811	27,213,832	2,892,486	1,019,931	1,963,062	2,264,444	3,814,000	65,701,230
	Daily average	471,860	384,381	877,866	93,306	32,901	63,325	73,724	123,032	2,119,394
November:	Month	14,142,389	11,340,930	26,155,652	2,841,780	1,020,600	1,962,943	2,169,685	3,578,000	63,211,979
	Daily average	471,413	378,031	871,855	94,726	34,020	65,431	72,323	119,267	2,107,066
December:	Month	14,595,028	11,637,171	25,487,818	2,777,879	1,037,539	1,966,481	2,067,855	3,694,000	61,263,770
	Daily average	470,807	375,393	757,672	89,609	33,469	63,435	66,705	119,161	1,976,251
	Total 12 months	178,127,794	149,487,234	314,378,759	35,339,206	12,529,870	22,467,889	28,772,651	44,200,000	785,304,403
	Daily average	486,683	408,435	858,958	96,555	34,236	61,387	78,617	120,765	2,145,640